UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2005 MAY 27 PM 12 54

RECEIVED
070 FARMINGTON NM

1a. Type of Work
DRILL

5. Lease Number
NMSF-078125
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
Sunray A

9. Well Number
#1M

4. Location of Well
Unit G (SWNE), 2565' FNL, 1485' FEL

Latitude 36° 48.7242'N
Longitude 107° 52.0273'W

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

11. Sec., Twn, Rge, Mer. (NMPM)
G Sec. 15, T30N, R10W

API # 30-045- 33178

14. Distance in Miles from Nearest Town
9 miles to Aztec, NM

12. County
San Juan

13. State
NM

15. Distance from Proposed Location to Nearest Property or Lease Line
1485'

16. Acres in Lease

17. Acres Assigned to Well
314.18 E/2

18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease
1275'- Sunray A #210

19. Proposed Depth
7668'

20. Rotary or Cable Tools
Rotary

21. Elevations (DF, FT, GR, Etc.)
6474' GL

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program
See Operations Plan attached

24. Authorized by: Joni Clark
Sr. Regulatory Specialist

5/27/05
Date

JUL 2005
OIL CONS. DIV.
DIST. 3

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY Wayne Townsend TITLE Actg AFM DATE 7/19/05

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.

NMOCD

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer DD, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
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
30-045-33178	72319/71599	Blanco Mesaverde/Basin Dakota

[4] Property Code	[5] Property Name	[6] Well Number
7561	SUNRAY A	1M

[7] OGRID No.	[8] Operator Name	[9] Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	6474'

[10] Surface Location

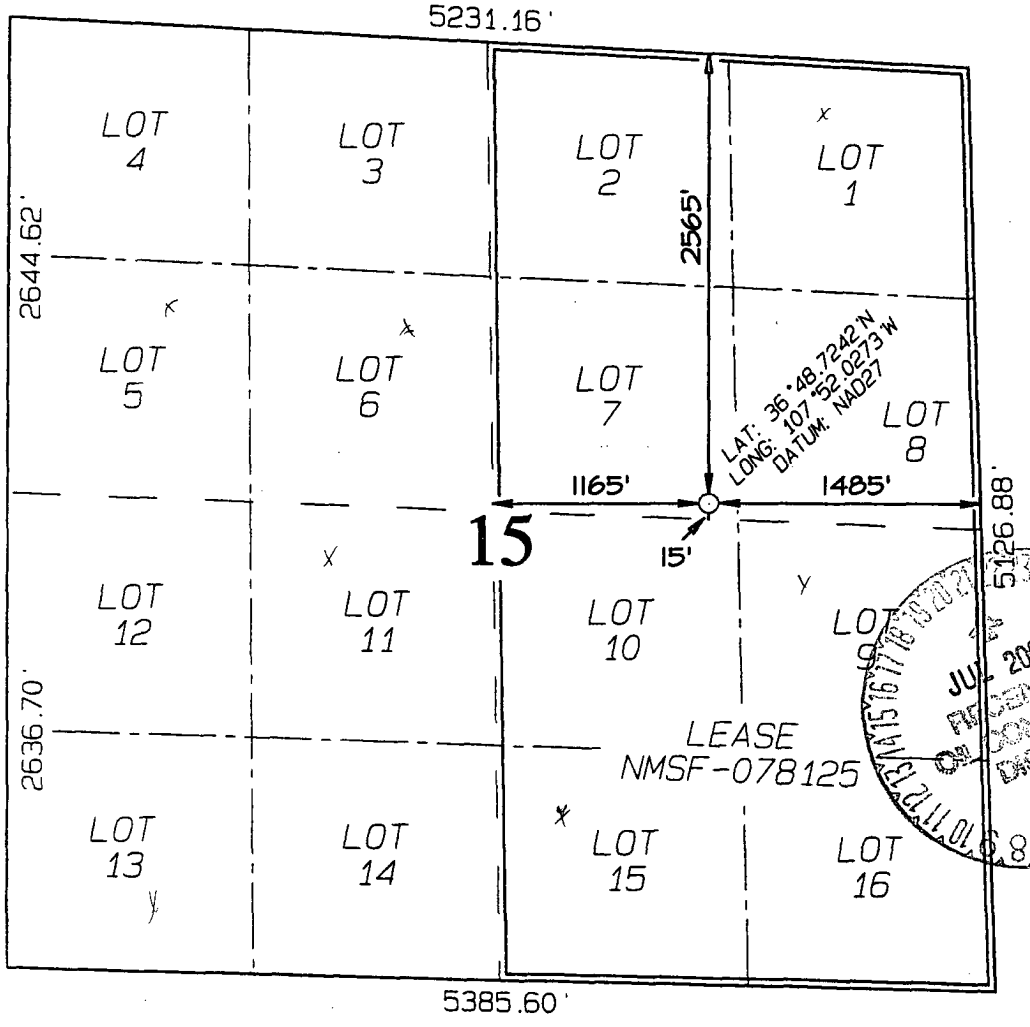
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	15	30N	10W		2565	NORTH	1485	EAST	SAN JUAN

[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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
E/2 314.18 acres			

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

Joni Clark

Printed Name

Sr. Regulatory Specialist

Title

4-1-05

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: MARCH 4, 2005

Signature and Seal of Professional Surveyor

JUL 2005
RECEIVED
OIL CONS. DIV.
DIST. 3

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS

Certificate Number 15269

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. **30-045-**

5. Indicate Type of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No. **NMSF-078125**

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: **Sunray A**

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

8. Well Number: **1M**

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: **Blanco Mesaverde/Basin Dakota**

4. Well Location
Unit Letter **G** : **2565** feet from the **North** line and **1485** feet from the **East** line
Section **15** Township **30N** Range **10W** NMPM County **San Juan**

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* **6474'**

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:				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.

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 Joni Clark TITLE **Regulatory Specialist** DATE **4/15/2005**

Type or print name **Joni Clark** E-mail address: jclark@br-inc.com Telephone No. **505-326-9700**

For State Use Only

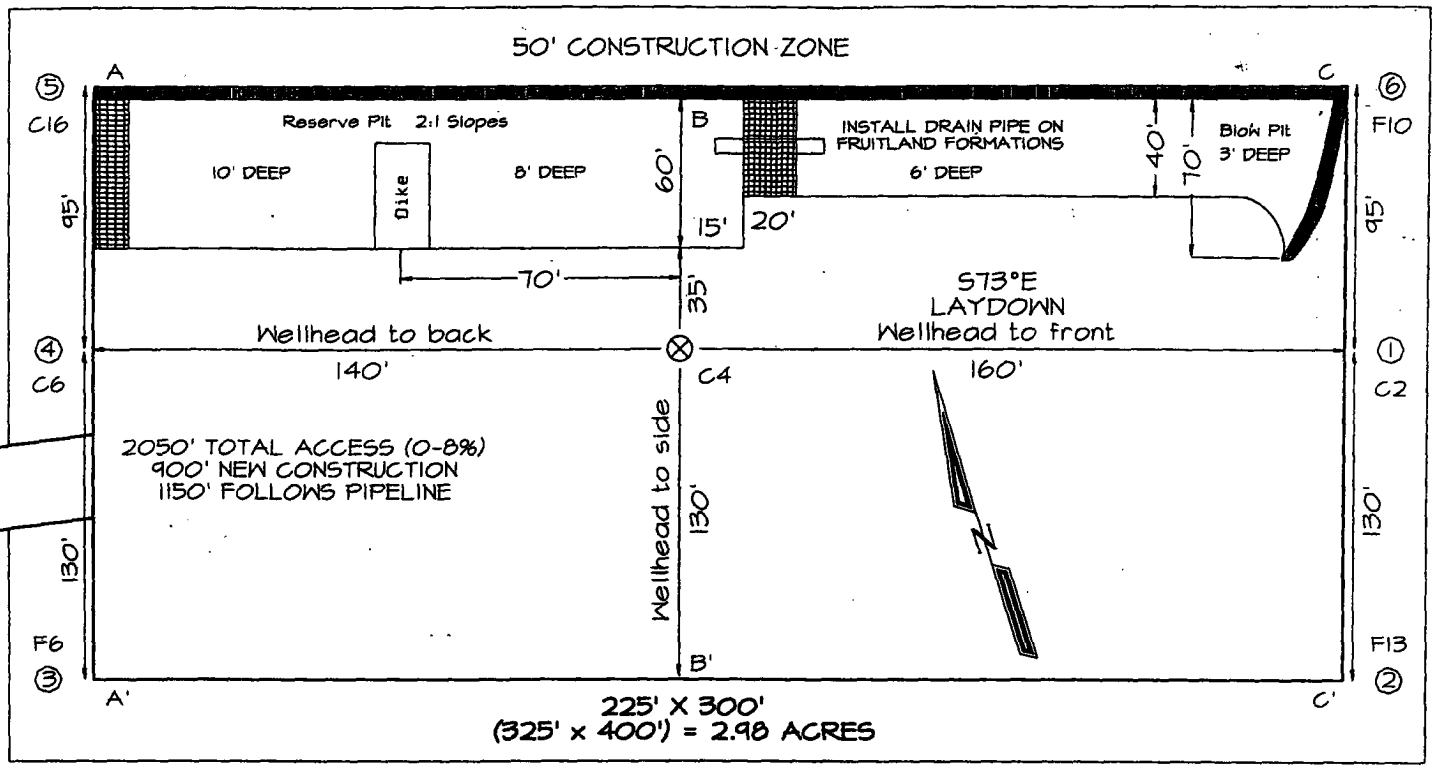
APPPROVED BY _____ TITLE **DEPUTY OIL & GAS INSPECTOR, DIST. #3** DATE **JUL 21 2005**

Conditions of Approval (if any):

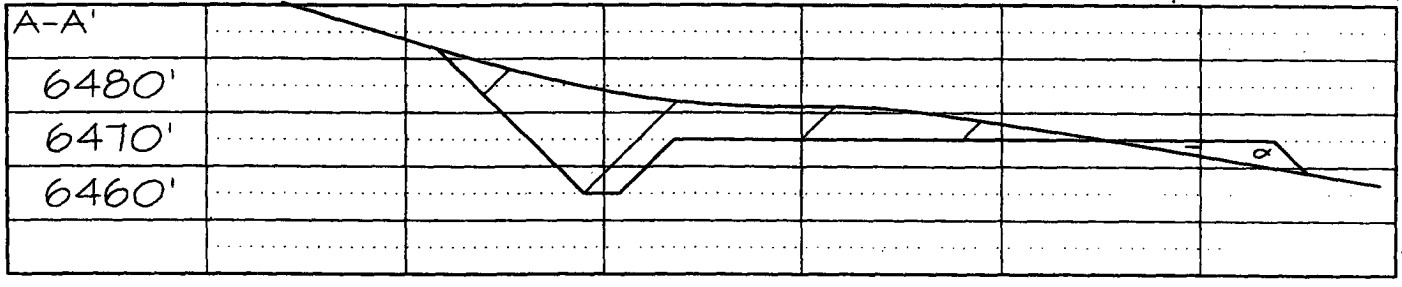
PLAT #1

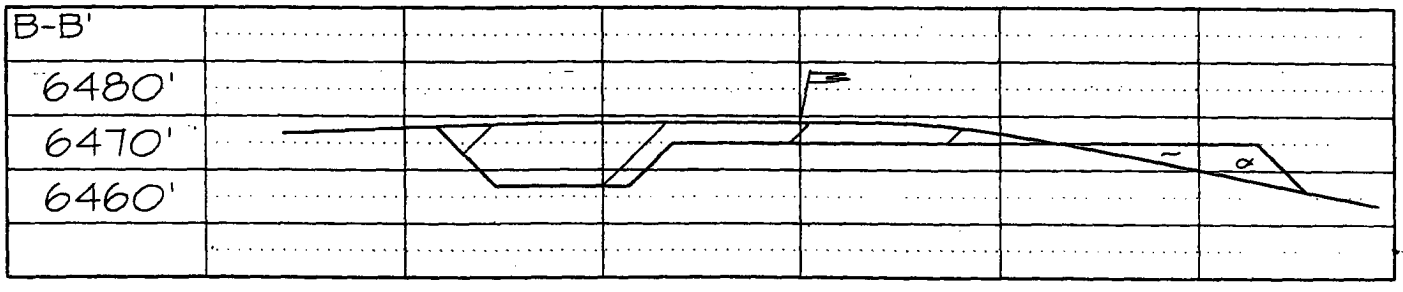
BURLINGTON RESOURCES OIL & GAS COMPANY, LP
SUNRAY A #1M, 2565' FNL & 1485' FEL
SECTION 15, T30N, R10W, NMPM, SAN JUAN COUNTY, NM
GROUND ELEVATION: 6474' DATE: MARCH 4, 2005

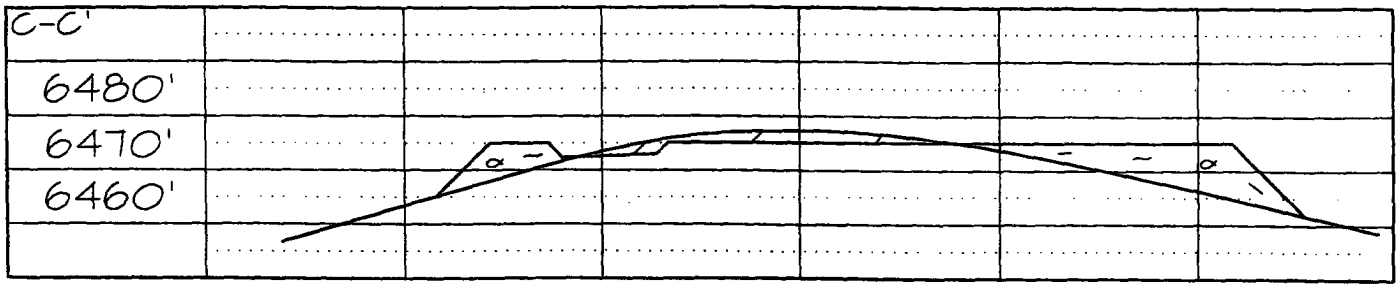
LATITUDE: 36°48'43"
LONGITUDE: 107°52'02"
DATUM: NAD1927



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: 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: SUNRAY A 1M
Location: 2565' FNL & 1485' FEL, Section Sec 15 T30N R10W
San Juan County, New Mexico

Formation: Blanco Mesaverde/Basin Dakota
Elevation: 6474' GL

Formation Tops:	***Top***	***Bottom***	***Contents***
Surface	San Jose	1831'	
Ojo Alamo	1831'	1911'	aquifer
Kirtland	1911'	2891'	gas
Fruitland	2891'	3113'	gas
Pictured Cliffs	3113'	3281'	gas
Lewis	3281'	3836'	
Huerfanito Bentonite	3836'		
Chacra	4131'	4711'	gas
Massive Cliff House	4711'	4886'	gas
Menefee	4886'	5341'	gas
Massive Point Lookout	5341'	5703'	gas
Mancos Shale	5703'	6626'	
Gallup	6626'	7366'	gas
Greenhorn	7366'	7416'	gas
Graneros	7416'	7465'	gas
Two Wells	7465'	7559'	gas
Paguate	7559'	7611'	gas
Cubero	7611'	7668'	gas
Encinal	7668'	7668'	gas
Total Depth:	7668'		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:

Interval	Type	Weight	Vis.	Fluid Loss
0 - 120'	Spud MUD/Air/Air Mist	8.4 - 9.0	40 - 50	no control
120 - 3381'	LSND	8.4 - 9.0	30 - 60	no control
3381 - 7668'	Air/Air Mist/Nitrogen	n/a	n/a	n/a

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' - 3539'	7"	20#	J-55
6 1/4"	0' - 7668'	4 1/2"	10.5#	J-55

Tubing Program:

Depth Interval	Csg.Size	Wt.	Grade
0' - 7668'	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.

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. BOPE ✓

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 ½" 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 313 sacks Premium Lite cement with 3% calcium chloride, 0.25 pps Celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate. Tail w/90 sacks Type III cmt w/1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss (792 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/42 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, .25 pps celloflake, .2% fluid loss. Second stage: 270 sacks Premium Lite cement with 3% calcium chloride, .25 pps celloflake, 5 pps LCM-1, .4% fluid loss, .4% sodium metasilicate (124 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 @ 1911'. Two turbolating centralizers at the base of the Ojo Alamo 1911'. 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 284 sxs 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 (563 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 east half of Section 15 is dedicated to the Mesa Verde and Dakota.
- This gas is dedicated.

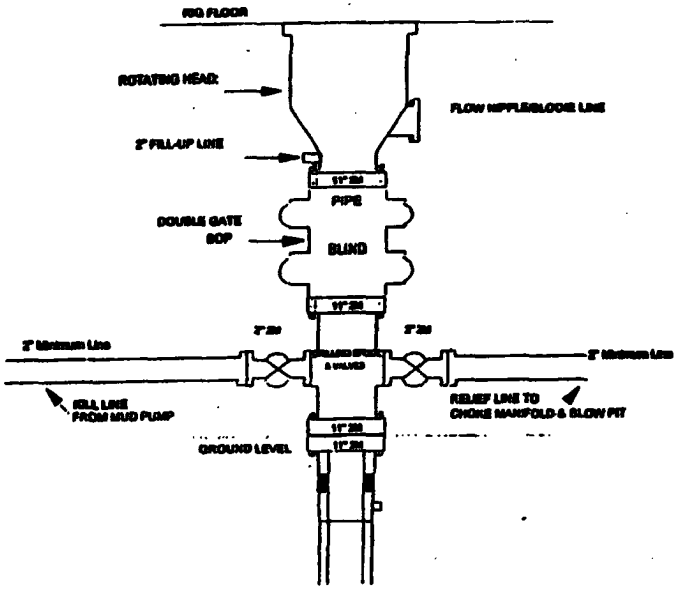
Drilling Engineer

5/27/05

Date

Burlington Resources

Drilling Rig
2000 psi System



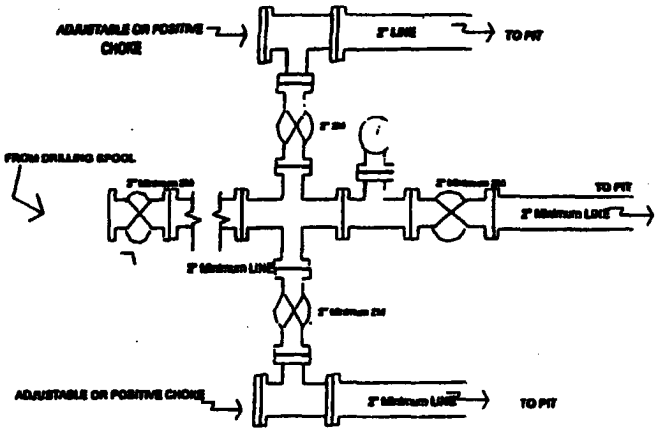
BOP installation from Surface Casing Point to Total Depth. 11" Bore 10" Nominal, 2000 psi working pressure double gate BOP to be equipped with blind rams and pipe rams. A 500 psi rotating head on top of ram preventers. *All BOP equipment is 2,000 psi working pressure*

4-20-01

Figure #1

BURLINGTON RESOURCES

Drilling Rig
Choke Manifold Configuration
2000 psi System

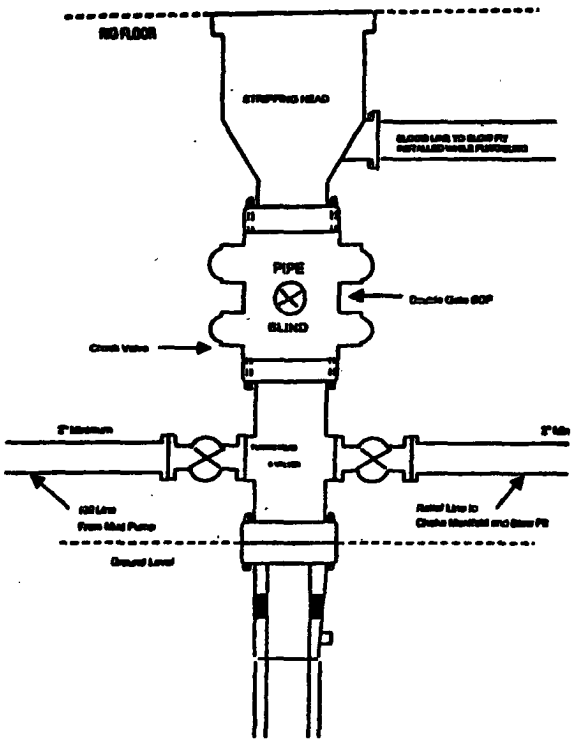


Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

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

4-20-01