

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL	5. Lease Number Apache #124 Unit Reporting Number	
1b. Type of Well GAS	6. If Indian, All. or Tribe Arizona Jicarilla A	
2. Operator <b>BURLINGTON</b> 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 9. Well Number #4A	
4. Location of Well Unit E (SWNW), 1330' FNL, 810' FWL  Latitude 36° 23.3268'N Longitude 107° 12.5377'W	10. Field, Pool, Wildcat Blanco Mesaverde/ Blanco Pictured Cliffs South 11. Sec., Twn, Rge, Mer. (NMPM) E Sec. 24, T25N, R4W API # 30-039- 30045	
14. Distance in Miles from Nearest Town 85 miles to Bloomfield, NM	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 810'	17. Acres Assigned to Well 320 W2 MV/ 160 NW4 DK	
16. Acres in Lease	20. Rotary or Cable Tools Rotary	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 350'- Enervest Jicarill Apache 124 #9	22. Approx. Date Work will Start	
19. Proposed Depth 5992'	23. Proposed Casing and Cementing Program See Operations Plan attached	
21. Elevations (DF, FT, GR, Etc.) 7019' GL	24. Authorized by: <u>[Signature]</u> Regulatory Analyst	

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.

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

NMOC

12/5/06

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.2  
and appeal pursuant to 43 CFR 3165.4

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

District II  
PO Drawer 00, 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

<sup>1</sup> API Number <b>30-039 - 30045</b>	<sup>2</sup> Pool Code <b>72319/72439</b>	<sup>3</sup> Pool Name <b>Blanco MV/Blanco Pictured Cliffs South</b>
<sup>4</sup> Property Code <b>18475</b>	<sup>5</sup> Property Name <b>ARIZONA JICARILLA A</b>	<sup>6</sup> Well Number <b>4A</b>
<sup>7</sup> GRID No. <b>14538</b>	<sup>8</sup> Operator Name <b>BURLINGTON RESOURCES OIL &amp; GAS COMPANY, LP</b>	<sup>9</sup> Elevation <b>7019'</b>

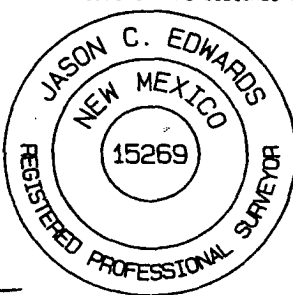
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	24	25N	4W		1330	NORTH	810	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 <b>MV 320 ac W2 PC 160 NW4</b>					<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

<div><p>16</p><p>5273.40'</p><p>1330'</p><p>LAT: 36°23.3268' N LONG: 107°12.5377' W DATUM: NAD27</p><p>810'</p><p>LAT: 36.38879° N LONG: 107.20956° W DATUM: NAD83</p><p>LEASE JICARILLA APACHE #124</p><p>5280.00'</p><p>24</p><p>LEASE JICARILLA APACHE #124</p><p>5266.14'</p></div>	<div><p><sup>17</sup> OPERATOR CERTIFICATION</p><p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p><p><i>Philana Thompson</i></p><p>Signature <b>Philana Thompson</b></p><p>Printed Name <b>Regulatory Analyst</b></p><p>Title <b>8/9/06</b></p><p>Date</p><p><sup>18</sup> SURVEYOR CERTIFICATION</p><p>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.</p><p>Date of Survey: JULY 7, 2006</p><p>Signature and Seal of Professional Surveyor</p><p></p><p><b>JASON C. EDWARDS</b></p><p>Certificate Number 15269</p></div>
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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

Form C-103

May 27, 2004

## OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

30-039- 30045

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil &amp; Gas Lease No.

Apache #124

7. Lease Name or Unit Agreement Name

Arizona Jicarilla A

8. Well Number

#4A

9. OGRID Number

14538

10. Pool name or Wildcat

Blanco Mesaverde/ Blanco Pictured Cliffs South

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 E : 1330 feet from the North line and 810' feet from the West line  
 Section 24 Township 25N Rng 4W NMPM County Rio Arriba

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

7019'

Pit or Below-grade Tank Application

☐ or Closure ☐

Pit type

new drill

Depth to Groundwater

&lt;50'

Distance from nearest fresh water well

&gt;1000'

Distance from nearest surface water

&lt;100'

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 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, 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 Analyst

DATE

5/15/2006

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. IV

DATE

DEC 05 2006

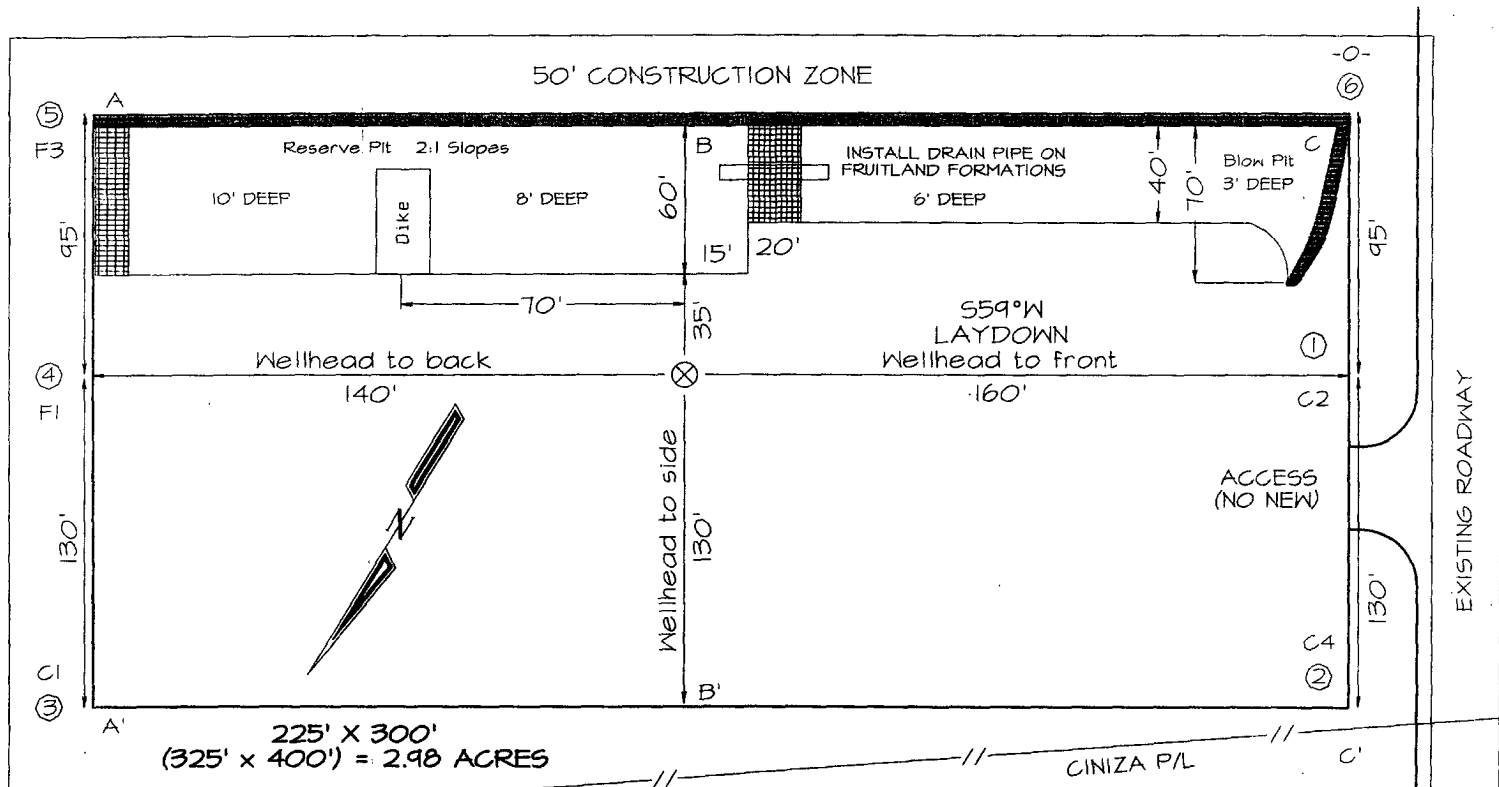
Conditions of Approval (if any):

Vulnerable area, pits to be closed according to

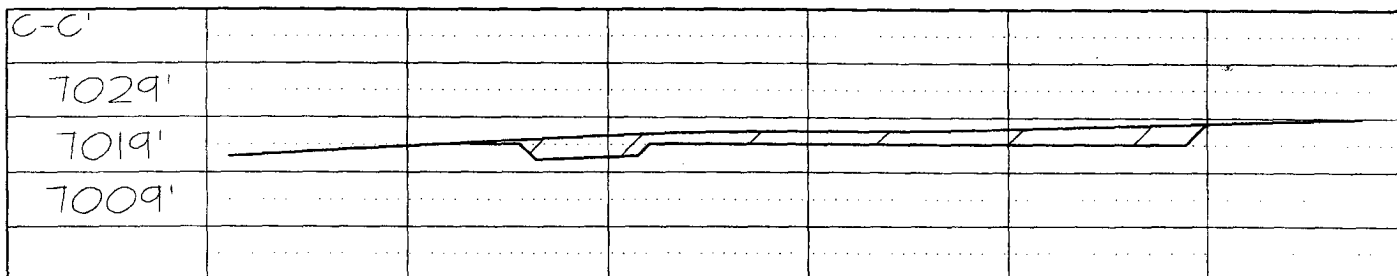
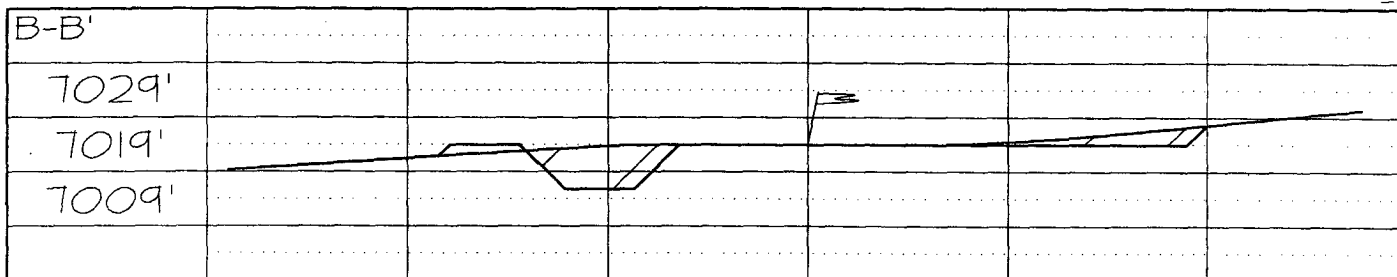
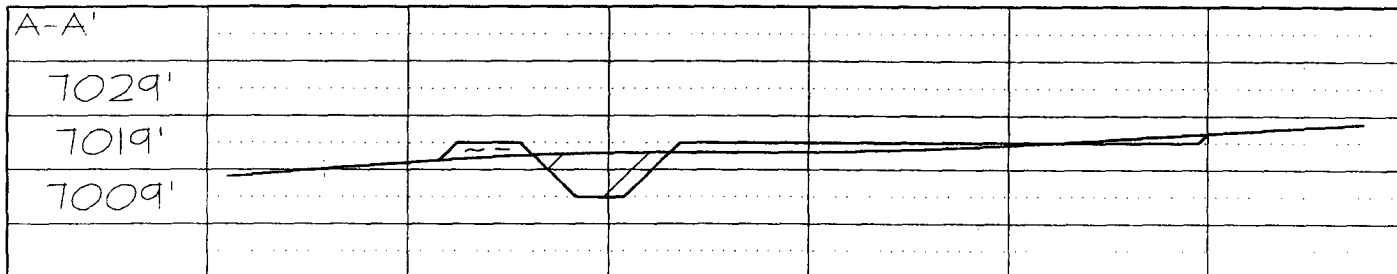
PLAT #1

**BURLINGTON RESOURCES OIL & GAS COMPANY, LP**  
**ARIZONA JICARILLA A #4A, 1330' FNL & 810' FWL**  
**SECTION 24, T25N, R4W, NMPM, RIO ARriba COUNTY, NM**  
**GROUND ELEVATION: 7019' DATE: JULY 7, 2006**

**LATITUDE: 36.38879° N**  
**LONGITUDE: 107.20956° W**  
 DATUM: NAD1983



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:** Arizona Jicarilla A 4A  
**Location:** 1330' FNL, 790' FWL, Section 24, T-25-N, R-4-W  
Rio Arriba County, New Mexico  
Latitude 36° 23.3268', Longitude 107° 12.5415'  
**Formation:** Blanco Mesaverde/Blanco Pictured Cliffs South  
**Elevation:** 7019' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	3038'	
Ojo Alamo	3038'	3113'	aquifer
Kirtland	3113'	3339'	gas
Fruitland	3339'	3441'	gas
Pictured Cliffs	3441'	3553'	gas
Lewis	3553'	3846'	
Huerfanito Bentonite	3846'		
Chacra	4342'	5139'	gas
Cliff House	5139'	5158'	gas
Menefee	5158'	5592'	gas
Point Lookout	5592'	5992'	gas
TD	5992'		

### 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/ <del>Air/Air Mist</del>	8.4-9.0	40-50	no control
320' - 5992'	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' - 5992'	4 1/2"	10.5#	J-55

**Tubing Program:** 0' - 5992' 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 @ 4445'. First Stage: Lead with w/ <sup>253</sup>51 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: 590 sacks Premium Lite cmt w/3% calcium chloride, 0.4% metasilicate, 0.25 pps celloflake, 5 pps LCM-1 and 0.4% FL-52. (2017 cu ft - 50% excess, circulate to surface, run CBL/temperature survey if cement is not circulated to surface.)

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 @ 3113'. Two turbolating centralizers at the base of the Ojo Alamo 3113'. 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.

**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 @ 4445'. First Stage: Lead with w/ <sup>253</sup>51 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: 590 sacks Premium Lite cmt w/3% calcium chloride, 0.4% metasilicate, 0.25 pps celloflake, 5 pps LCM-1 and 0.4% FL-52. (2017 cu ft - 50% excess, circulate to surface, run CBL/temperature survey if cement is not circulated to surface.)

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 @ 3113'. Two turbolating centralizers at the base of the Ojo Alamo 3113'. 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.

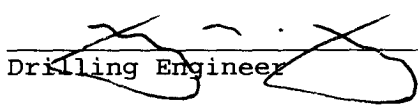
**Special Drilling Operations (Air/Mist Drilling):**

- 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 Mesaverde and Pictured Cliffs 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	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 24 is dedicated to the Mesaverde formation and the northwest quarter of Section 24 is dedicated to the Pictured Cliffs formation.
- This gas is dedicated.

  
Drilling Engineer

5/30/06  
Date