

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 SF-078115 Unit Reporting Number
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator <b>BURLINGTON RESOURCES</b> 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 Grenier 9. Well Number #6B
4. Location of Well 1165' FSL, 665' FWL Latitude 36° 52.8'N, Longitude 108° 01.2'W	10. Field, Pool, Wildcat Blanco Mesaverde 11. Sec., Twn, Rge, Mer. (NMPM) M Sec. 20, T-31-N, R-11-W API # 30-045-30465
14. Distance in Miles from Nearest Town 6.2 miles from the inter. of Hwy 550 & Hwy 173	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 665'	
16. Acres in Lease	17. Acres Assigned to Well 320 W/2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 868'	
19. Proposed Depth 5241' This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6039' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	<b>DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"</b>
24. Authorized by: <u><i>Regulatory/Compliance Supervisor</i></u> Regulatory/Compliance Supervisor	Date <u>12-8-00</u>

PERMIT NO. \_\_\_\_\_ APPROVAL DATE 1/12/01  
APPROVED BY \_\_\_\_\_ TITLE PE DATE 1/12/01

Archaeological Report to be submitted

Threatened and Endangered Species Report to be submitted

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  
P.O. Box 1980, Hobbs, N.M. 88241-1980

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-10z  
Revised February 21, 1994

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

DISTRICT II  
P.O. Drawer DD, Artesia, N.M. 88211-0719

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, NM 87504-2088

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-30465		<sup>2</sup> Pool Code 72319	<sup>3</sup> Pool Name Blanco Mesaverde
<sup>4</sup> Property Code 18530	<sup>5</sup> Property Name GRENIER		<sup>6</sup> Well Number 6B
<sup>7</sup> OGRID No. 14538	<sup>8</sup> Operator Name BURLINGTON OIL AND GAS, INC.		<sup>9</sup> Elevation 6039'

<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
M	20	31-N	11-W		1165'	SOUTH	665'	WEST	SAN JUAN

<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 W/320		<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

				<p>17 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>Peggy Cole</i> Signature Peggy Cole Printed Name Regulatory Supervisor Title 12-8-00 Date</p>	
<p>18 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>9-11-00 Date of Survey Signature and Seal of Professional Surveyor 8894 Certificate Number</p>					

## OPERATIONS PLAN

**Well Name:** Grenier #6B  
**Surface Location:** 1165' FSL, 665' FWL, Section 20, T-31-N, R-11-W  
San Juan County, New Mexico  
Latitude 36° 52.8'N, Longitude 108° 01.2'W

**Formation:** Blanco Mesaverde  
**Elevation:** 6039' GR

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	925'	aquifer
Ojo Alamo	925'	1001'	aquifer
Kirtland	1001'	1923'	gas
Fruitland	1923'	2582'	gas
Pictured Cliffs	2582'	2722'	gas
Lewis	2722'	3291'	gas
<b>Intermediate TD</b>	<b>2972'</b>		
Mesa Verde	3291'	3634'	gas
Chacra	3634'	4176'	gas
Massive Cliff House	4176'	4369'	gas
Menefee	4369'	4841'	gas
Point Lookout	4841'		gas
<b>Total Depth</b>	<b>5241'</b>		

### Logging Program:

Cased hole logging - Gamma Ray, Cement bond from surface to TD  
Open hole logging - none  
Mud Logs/Coring/DST - none

### Mud Program:

<u>Interval- MD</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 200'	Spud	8.4-9.0	40-50	no control
200- 2972'	LSND	8.4-9.0	30-60	no control
2972- 5241'	Air/Mist	n/a	n/a	n/a

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

### Casing Program (as listed, the equivalent, or better):

<u>Hole Size</u>	<u>Measured Depth</u>	<u>Csg Size</u>	<u>Weight</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	H-40
8 3/4"	0' - 2972'	7"	20.0#	J-55
6 1/4"	2872' - 5241' ✓	4 1/2"	10.5#	J-55

**Tubing Program:** 0' -5241' 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.

**BOP Specifications, Wellhead and Tests (cont'd):****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.

**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 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 - cement with 159 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (188 cu.ft. of slurry, 200% excess to circulate to surface). WOC 8 hrs. 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 w/302 sx 50/50 Class "G"/Trinity Light with 2.5% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Flocele. Tail with 90 sx Class "G" 50/50 poz w/2% gel, 2% calcium chloride, 5 pps Gilsonite, 0.1% antifoam and 0.25 pps Flocele (894 cu.ft. of slurry, 100% excess to circulate to surface). WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL will be run to determine TOC. Test casing to 1500 psi for 30 minutes.

See attached Alternative Intermediate Lead Slurry.

7" intermediate casing alternative two stage: Stage collar at 1823'. First stage: cement w/269 sx 50/50 Class "G" poz w/2% gel, 2% calcium chloride, 5 pps Gilsonite, 0.1% antifoam and 0.25 pps Flocele. Second stage: w/212 sx 50/50 Class "G"/Trinity Light with 2.5% sodium metasilicate, 2% calcium chloride, 10 pps Gilsonite, 0.5 pps Flocele (894 cu.ft. of slurry, 100% 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 at 1001'. Two turbolating centralizers at the base of the Ojo Alamo at 1001'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Liner -

Cement to circulate liner top. Pump 255 sx Class "G" 50/50 poz w/4.5% gel, 0.25 pps Flocele, 5 pps Gilsonite, 0.25% fluid loss, 0.1% retardant (365 cu.ft., 50% excess to circulate liner). WOC a minimum of 18 hrs prior to completing.

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 gas/mist drilling:

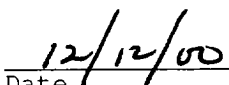
- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite 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 formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	150 psi
Pictured Cliffs	260 psi
Mesa Verde	375 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 20 is dedicated to the Mesa Verde.
- This gas is dedicated.

  
Drilling Engineer

  
Date

# BURLINGTON OIL AND GAS, INC.

## GRENIER 6B

SEC. 20, T-31-N, R-11W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

1165' FSL, 665' FWL

### APD MAP #1

1100' NEW B.L.M. CONSTRUCTION  
500' NE/SW SECTION 20, T31N, R11W  
500' NW/SW SECTION 20, T31N, R11W  
100' SW/SW SECTION 20, T31N, R11W

