

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 NMSF-078423 Unit Reporting Number MV-8910016500 DK-891001650A
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator BURLINGTON RESOURCES Oil & Gas Company	7. Unit Agreement Name San Juan 29-7 Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name San Juan 29-7 Unit
4. Location of Well 1540' FNL, 1065' FWL, Latitude 36° 44.6, Longitude 107° 34.9	9. Well Number 80B
10. Field, Pool, Wildcat Blanco MV/Basin DK	11. Sec., Twn, Rge, Mer. (NMPM) E Sec. 9, T-29-N- R-7-W API # 30-039-27021
14. Distance in Miles from Nearest Town 16 miles to Blanco	12. County Rio Arriba
15. Distance from Proposed Location to Nearest Property or Lease Line 1065'	13. State NM
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 22'	
19. Proposed Depth 7443'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6136' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".
24. Authorized by: <u>Patty Cale</u> Regulatory/Compliance Supervisor	12-26-01 Date

PERMIT NO. _____

APPROVAL DATE _____

APPROVED BY /s/ David J. Mankiewicz

TITLE _____

DATE _____

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

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P.O. 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 30-039- <u>27021</u>	² Pool Code 72319/71599	³ Pool Name Blanco Mesaverde/Basin Dakota
⁴ Property Code 7465	⁵ Property Name SAN JUAN 29-7 UNIT	⁶ Well Number 80B
⁷ OGRD No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS INC.	⁹ Elevation 6136

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
E	9	29-N	7-W		1540	NORTH	1065	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 MV-W/320 DK-W/320									
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

18

<p>18</p> <p>CALC'D CORNER</p> <p>N 89°43' W 5287.9'(R)</p> <p>CANDELARIA, PABLO, ET UX</p> <p>1540'</p> <p>220'</p> <p>1065'</p> <p>257'</p> <p>1100'</p> <p>LAT: 36°44.6' N. LONG: 107°34.9' W.</p> <p>9</p> <p>FD 2 1/2" GLO 1914 BRASS CAP</p> <p>NMSF-078423</p>	<p>17</p> <p>FD 2 1/2" GLO 1914 BRASS CAP</p> <p>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><u>Peggy Cole</u> Signature</p> <p><u>Peggy Cole</u> Printed Name</p> <p><u>Regulatory Supervisor</u> Title</p> <p><u>12-26-01</u> Date</p>
	<p>18</p> <p>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><u>7-25-01</u> Date of Survey</p> <p><u>[Signature]</u> Signature and Seal of Professional Surveyor</p> <p><u>ROY A. RUSH</u> REGISTERED PROFESSIONAL SURVEYOR NEW MEXICO 19894</p> <p>Certificate Number</p>

OPERATIONS PLAN

Well Name: San Juan 29-7 Unit #80B
1540' FNL, 1065' FWL, Section 9, T-29-N, R-7-W
Rio Arriba County, New Mexico
Latitude 36° 44.6, Longitude 107° 34.9
Formation: Blanco Mesa Verde/Basin Dakota
Elevation: 6136' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1953'	
Ojo Alamo	1953'	2123'	aquifer
Kirtland	2123'	2498'	gas
Fruitland	2498'	2928'	
Pictured Cliffs	2928'	3068'	gas
Lewis	3068'	3688'	gas
Intermediate TD	3168'		
Huerfanito Bentonite	3688'	3908'	gas
Chacra	3908'	4653'	gas
Cliff House	4653'	4763'	
Menefee	4763'	5123'	gas
Point Lookout	5123'	5524'	gas
Mancos	5524'	6398'	gas
Gallup	6398'	7133'	gas
Greenhorn	7133'	7188'	gas
Graneros	7188'	7248'	gas
Dakota	7248'		gas
TD	7443'		

Logging Program:

Mud logs - none
Open hole - none
Cased hole - CBL-CCL-GR - TD to surface
Cores - none

Mud Program:

<u>Interval</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- 3168'	LSND	8.4-9.0	30-60	no control
3168- 7443'	Air/N2	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>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	WC-50
8 3/4"	0' - 3168'	7"	20.0#	J-55
6 1/4"	3068' - 7443'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 7443' 2 3/8" 4.7# J-55

BOP Specifications, Wellhead and Tests:

Surface to Intermediate TD -

11" 3000 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" 3000 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.

Operations Plan - San Juan 29-7 Unit #80B

Surface to Total Depth -

2" nominal, 3000 psi minimum choke manifold (Reference Figure #2).

Completion Operations -

7 1/16" 3000 psi double gate BOP stack (Reference Figure #3). 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 3000 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 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.

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/324 sx 50/50 Class "G" TXI Liteweight cement with 2% calcium chloride, 2.5% sodium metasilicate, 10 pps Gilsonite and 0.5 pps Celloflake. Tail w/90 sx Class "G" 50/50 poz w/2% gel, 2% calcium chloride, 5 pps Gilsonite, 0.25 pps Celloflake (952 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 during completion operations 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 2398'. First stage: cement with w/181 sx Class "G" 50/50 poz w/2% gel, 2% calcium chloride, 5 pps gilsonite, 0.25 pps Celloflake. Second stage: 279 sx 50/50 Class "G"/TXI Liteweight with 2% calcium chloride, 2.5% sodium metasilicate, 10 pps Gilsonite, 0.25 pps Celloflake (952 cu.ft., 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 2123'. Two turbolating centralizers at the base of the Ojo Alamo at 2123'. 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 cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 436 sx 50/50 Class "G" Poz with 5% gel, 0.25 pps Celloflake, 5 pps Gilsonite (628 cu.ft.), 40% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

Cement float shoe on bottom with float collar spaced on top of float shoe.

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

Note: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. In its place, a long string of 4 1/2" casing will be run and cemented with a minimum of 100' of cement overlap between the 4 1/2" x 7" casing strings. After completion of the well, a 4 1/2" retrievable bridge plug will be set below the top of cement in the 4 1/2" x 7" overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4 1/2" x 7" overlap and laid down. The 4 1/2" bridge plug will then be retrieved and the production tubing will be run to produce the well.

- 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 (Gas/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.
- Deduster equipment will be utilized.
- 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 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	2500 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The west half of Section 9 is dedicated to the Mesaverde and the Dakota in this well.
- This gas is dedicated.

Brennan D. Shurt
Drilling Engineer

12/27/01
Date