

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 NM-03202 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 San Juan 9. Well Number 10C	
4. Location of Well 1850' FNL, 1105' FWL  Latitude 36° 49.7, Longitude 107° 52.5	10. Field, Pool, Wildcat Blanco MV/Basin Dakota  11. Sec., Twn, Rge, Mer. (NMPM) E Sec 10, T-30-N, R-10-W API # 30-045-31015	
14. Distance in Miles from Nearest Town 8.7 Miles to Aztec	12. County San Juan	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1105	17. Acres Assigned to Well 310.26 <i>W/2</i>	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 221'	20. Rotary or Cable Tools Rotary	
19. Proposed Depth 7797	22. Approx. Date Work will Start	
21. Elevations (DF, FT, GR, Etc.) 6549' GR	23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <i>[Signature]</i> Regulatory/Compliance Supervisor	Date <i>12-26-01</i>	

PERMIT NO. \_\_\_\_\_ APPROVAL DATE *3/22/02*  
APPROVED BY \_\_\_\_\_ 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.

DISTRICT II  
811 South First, Artesia, N.M. 88210

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

**DISTRICT IV**  
2040 South Pacheco, Santa Fe, NM 87505

**OIL CONSERVATION DIVISION**  
2040 South Pacheco  
Santa Fe, NM 87505

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

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045 31015		*Pool Code 72319/71599	*Pool Name Blanco MV/Basin Dakota
*Property Code 7451	*Property Name SAN JUAN		*Well Number 10C
*OGRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS, INC.		*Elevation 6549'

### <sup>10</sup> Surface Location

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	10	30-N	10-W		1850	NORTH	1105	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
Dedicated Acres W-310.26			Joint or Infill		Consolidation Code		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

ON A NON-DEVELOPED TRACT

FD 3 1/4"  
BLM BC.  
1967

LOT 4

LOT 5

LOT 12

LOT 13

FD 3 1/4"  
BLM BC.  
1967

S 88-04-30 E  
2715.10' (M)

1850'

1105'

588'

253'

673'

USA NM-03202

10

LOT 3

LOT 6

LOT 11

LOT 14

FD 3 1/4"  
BLM BC.  
1967

LOT 2

LOT 7

LOT 10

LOT 15

LOT 1

LOT 8

LOT 9

LOT 16

LAT. 36°49'41.9" N  
LONG. 107°52'31.5" W.  
(N.A.D. 1927)

17 OPERATOR CERTIFICATION

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

**Signature**

Peggy Cole  
Printed Name

Regulatory Supervisor  
Title

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

Signature and Seal of Professional Surveyor

8894

**Certificate Number**

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## OPERATIONS PLAN

**Well Name:** San Juan 10C  
**Location:** 1850' FNL, 1105' FWL, Sec 10, T-30-N, R-10-W  
San Juan County, NM  
Latitude 36° 49.7, Longitude 107° 52.5  
**Formation:** Blanco Mesaverde/Basin Dakota  
**Elevation:** 6549' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1891	
Ojo Alamo	1891'	1965'	aquifer
Kirtland	1965'	2981'	gas
Fruitland	2981'	3200'	gas
Pictured Cliffs	3200'	3342'	gas
Lewis	3342'	3931'	gas
Intermediate TD	3442'		
Mesa Verde	3931'	4254'	gas
Chacra	4254'	4835'	gas
Massive Cliff House	4835'	5030'	gas
Menefee	5030'	5442'	gas
Massive Point Lookout	5442'	5853'	gas
Mancos	5853'	6726'	gas
Gallup	6726'	7481'	gas
Greenhorn	7481'	7526'	gas
Graneros	7526'	7571'	gas
Dakota	7571'		
TD	7797'		

### Logging Program:

Cased hole - CBL-CCL-GR - TD to surface  
Open hole - Array Induction, Temp, CNL/CDL F/TD To Int. Csg  
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- 3442'	LSND	8.4-9.0	30-60	no control
3442- 7797'	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#	H-40
8 3/4"	0' - 3442'	7"	20.0#	J-55
6 1/4"	3342' - 7797'	4 1/2"	10.5#	J-55

### Tubing Program:

0' - 7797'      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.

**Surface to Total Depth -**

2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

**Completion Operations -**

7 1/16" 3000 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 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# celloflake/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/355 sx 50/50 Class G/TXI lightweight w/2.5% sodium metasilicate, 10# gilsonite/sx and 1/2# celloflake/sx, 2% Calcium Chloride. Tail w/90 sx 50/50 Class "G" Poz, 2% gel, 1/4 pps celloflake, 5 pps gilsonite, 0.1% antifoam agent, 2% Calcium Chloride (1031 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 at 2881'. First stage: cement with 129 sx 50/50 Class "G" Poz w/2% calcium chloride, 2% gel, 1/4 pps celloflake, 5 pps gilsonite, 0.1% antifoam agent. Second stage: 336 sx 50/50 Class G/TXI lightweight w/2.5% sodium metasilicate, 2% calcium chloride, 10# gilsonite/sx and 1/2# celloflake/sx (1031 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 1965'. Two turbolating centralizers at the base of the Ojo Alamo at 1965'. 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 -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 445 sx 50/50 Class "G" Poz with 5% gel, 0.25# celloflake/sx, 5# gilsonite/sx, 0.1% retardant and 0.25% fluid loss additive, 0.15% dispersant, 0.1% antifoam agent (641 cu.ft.), 40% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

4 1/2" production casing alternative: Lead w/184 sx 9.5 PPG Litecrete Blend w/0.11% dispersant, 0.5% fluid loss. Tail w/154 sx Class G 50/50 poz w/5% gel, 0.25 pps celloflake, 5 pps gilsonite, 0.25% fluid loss, 0.15% dispersant, 0.1% retarder, 0.1% antifoam (687 cu.ft., 50% excess to cement 4 1/2" x 7" overlap).

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

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

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.