

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2002 JUN 27 PM 2:49

1a. Type of Work DRILL	5. Lease Number NMSF-079510 Unit Reporting Number 8910016500
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 9. Well Number 33B
4. Location of Well 2180' FSL, 2610' FEL Latitude 36° 43.5, Longitude 107° 31.3	10. Field, Pool, Wildcat Blanco Mesaverde 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 13, T-29-N, R-7-W API # 30-039-27064
14. Distance in Miles from Nearest Town 10 miles from Navajo City	12. County Rio Arriba
15. Distance from Proposed Location to Nearest Property or Lease Line 2180'	13. State NM
16. Acres in Lease	17. Acres Assigned to Well 320 E/2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 1700'	
19. Proposed Depth 5725'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6303' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>[Signature]</u> Regulatory/Compliance Supervisor	Date 5-20-02

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

PERMIT NO. _____

APPROVAL DATE _____

APPROVED BY /s/ Charlie Beecham

TITLE ACTING

DATE AUG 26 2002

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 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

*API Number 30-039- 27064		*Pool Code 72319	*Pool Name Blanco Mesaverde
*Property Code 7465	*Property Name SAN JUAN 29-7 UNIT		*Well Number 338
*GRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY, LP		*Elevation 6303'

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
J	13	29N	7W		2180	SOUTH	2610	EAST	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-E/320	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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>16</div> <p>HE 017351</p> <p>USA SF-079514</p> <p>USA SF-078423</p> <p>FEE</p> <p>5285.28'</p> <p>5280.00'</p> <p>5280.00'</p> <p>5274.72'</p> <p>13</p> <p>460'</p> <p>30'</p> <p>LAT: 36°43.5'N LONG: 107°31.3'W</p> <p>2610'</p> <p>2180'</p>	<div>17 OPERATOR CERTIFICATION</div> <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></p> <p>Signature</p> <p>Peggy Cole</p> <p>Printed Name</p> <p>Regulatory Supervisor</p> <p>Title</p> <p>5-20-02</p> <p>Date</p>
	<div>18 SURVEYOR CERTIFICATION</div> <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: APRIL 19, 2002</p> <p>Signature and Seal of Professional Surveyor</p> <div><p>JASON C. EDWARDS</p><p>Certificate Number 15269</p></div>

APD MAP #1

NO NEW CONSTRUCTION
NW/SE SECTION 13, T29N, R7W

Romine Mesa

Canyon

San Rafael

San Rafael Spring

Pettus

Frances Mesa

Bernador

EXISTING R.O.W.

Pipeline

Well

6217, 6205, 6223, 6252, 6285, 6299, 6337, 6372, 6373, 6382, 6448, 6473, 6498, 6545, 6572, 6582, 6617, 6673, 6733, 6783, 6843, 6874, 6882, 6883, 6884, 6885, 6886, 6887, 6888, 6889, 6890, 6891, 6892, 6893, 6894, 6895, 6896, 6897, 6898, 6899, 6900, 6901, 6902, 6903, 6904, 6905, 6906, 6907, 6908, 6909, 6910, 6911, 6912, 6913, 6914, 6915, 6916, 6917, 6918, 6919, 6920, 6921, 6922, 6923, 6924, 6925, 6926, 6927, 6928, 6929, 6930, 6931, 6932, 6933, 6934, 6935, 6936, 6937, 6938, 6939, 6940, 6941, 6942, 6943, 6944, 6945, 6946, 6947, 6948, 6949, 6950, 6951, 6952, 6953, 6954, 6955, 6956, 6957, 6958, 6959, 6960, 6961, 6962, 6963, 6964, 6965, 6966, 6967, 6968, 6969, 6970, 6971, 6972, 6973, 6974, 6975, 6976, 6977, 6978, 6979, 6980, 6981, 6982, 6983, 6984, 6985, 6986, 6987, 6988, 6989, 6990, 6991, 6992, 6993, 6994, 6995, 6996, 6997, 6998, 6999, 7000

OPERATIONS PLAN

Well Name: San Juan 29-7 Unit #33B
Location: 2180' FSL, 2610' FEL, Section 13, T-29-N, R-7-W
Rio Arriba County, New Mexico
Latitude 36° 43.5, Longitude 107° 31.3
Formation: Blanco Mesa Verde
Elevation: 6303' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2270'	
Ojo Alamo	2270'	2415'	aquifer
Kirtland	2415'	2920'	
Fruitland	2920'	3155'	gas
Pictured Cliffs	3155'	3235'	gas
Lewis	3235'	3905'	gas
Intermediate TD	3485'		
Huerfanito Bentonite	3905'	4155'	gas
Chacra	4155'	4905'	gas
Massive Cliff House	4905'	5015'	gas
Menefee	5015'	5325'	gas
Point Lookout	5325'		gas
Total Depth	5725'		

Logging Program:

Mud Logs/Coring/DST -
Mud logs - none
Coring - none
DST - none
Open hole - none
Cased hole - Gamma Ray, CCL - surface to TD

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- 3485'	LSND	8.4-9.0	30-60	no control
3485- 5725'	Air/Mist/N2*	n/a	n/a	n/a

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

*Nitrogen might be used in conjunction with or instead of air to prevent a down hole fire.

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' - 3485'	7"	20.0#	J-55
6 1/4"	3385' - 5725'	4 1/2"	10.5#	J-55

Tubing Program: 0' - 5725' 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.

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 134 sx Type III cement with 1/4# Celloflake/sx and 2% 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/311 sx Premium Lite cmt w/3% calcium chloride, and 0.25 pps Flocele, 5 pps LCM-1, 0.4% fluid loss, 0.4% SMS. Tail w/90 sx Type III cmt w/1% calcium chloride, 0.2% fluid loss and 0.25 pps Flocele (785 cu.ft. of slurry, 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.

See attached alternative intermediate lead slurry.

7" intermediate casing alternative two stage: Stage collar at 2820'. First stage: cement with 12 sx Premium Lite cmt w/3% calcium chloride, 0.25 pps Flocele, 5 pps LCM-1, 0.4% fluid loss, 0.4% SMS. Tailed w/90 sx Type III cmt w/1% calcium chloride, 0.25 pps Flocele, 0.2% fluid loss. Second stage: 298 sx Premium Lite cmt w/3% calcium chloride, 0.25 pps Flocele, 5 pps LCM-1, 0.4% fluid loss, 0.4% SMS (785 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 at 2415'. Two turbolating centralizers at the base of the Ojo Alamo at 2415'. 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 170 sx Premium Lite cmt w/0.25 pps Celloflake, 0.3% CD-32, 6.25 pps LCM-1, 1% fluid loss (336 cu.ft., 40% excess to circulate liner top). 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 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 formation will be completed.
- 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
- 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 13 is dedicated to the Mesa Verde.
- This gas is dedicated.

Brennan D. Shurt
Drilling Engineer

5/21/2002
Date