

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2000 OCT 20 PM 2:26

1a. Type of Work
DRILL

5. Lease Number
SF-080669 070
Unit Reporting Number

1b. Type of Well
GAS

6. If Indian, All. or Tribe

2. Operator
**BURLINGTON
RESOURCES** Oil & Gas Company

7. Unit Agreement Name
San Juan 27-4 Unit

3. Address & Phone No. of Operator
PO Box 4289, Farmington, NM 87499

(505) 326-9700

8. Farm or Lease Name
San Juan 27-4 Unit
9. Well Number
43M

4. Location of Well
1605' FSL, 1935' FEL

Latitude 36° 34.2, Longitude 107° 16.3

10. Field, Pool, Wildcat
Blanco MV/Basin DK
11. Sec., Twn, Rge, Mer. (NMPPM)
Sec. 17, T-27-N, R-4-W
API # 30-039-26532

14. Distance in Miles from Nearest Town
16 miles from Gobernador

12. County Rio Arriba 13. State NM

15. Distance from Proposed Location to Nearest Property or Lease Line
1605'

16. Acres in Lease

17. Acres Assigned to Well
320 E/2

18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease
2100'

19. Proposed Depth
8080'

This activity is subject to technical and
procedural review pursuant to 43 CFR 3185.3
and appeal pursuant to 43 CFR 3185.4.

20. Rotary or Cable Tools
Rotary

21. Elevations (DF, FT, GR, Etc.)
6780' 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: Peggy Case
Regulatory/Compliance Supervisor

9-25-00
Date

PERMIT NO.

APPROVAL DATE

11/14/01

APPROVED BY

TITLE

AFM

DATE

11/14/01

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.

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 2086, Santa Fe, NM 87504-2086

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 30-039-26532		*Pool Code 72319/71599		*Pool Name Blanco Mesaverde/Basin Dakota	
*Property Code 7452		*Property Name SAN JUAN 27-4 UNIT			*Well Number 43M
*OGRID No. 14538		*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			*Elevation 6780'

10 Surface Location

UL or lot no. J	Section 17	Township 27N	Range 4W	Lot Idn	Feet from the 1605	North/South line SOUTH	Feet from the 1935	East/West line EAST	County RIO ARriba
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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 DK-E/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

16		5256.24'		17		5280.00'		17 OPERATOR CERTIFICATION	
5280.00'		1605'		LAT: 36°34.2'N LONG: 107°16.3'W		1935'		I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief	
								Signature <i>Peggy Cole</i>	
								Printed Name Peggy Cole	
								Regulatory Supervisor Title 9-25-00	
Date AUGUST 31, 2000		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 AUGUST 31, 2000		Signature and Seal of Surveyor <i>Nealec Edwards</i>	
5280.00'		1605'		1935'		5280.00'		NEALEC EDWARDS NEW MEXICO 6857	

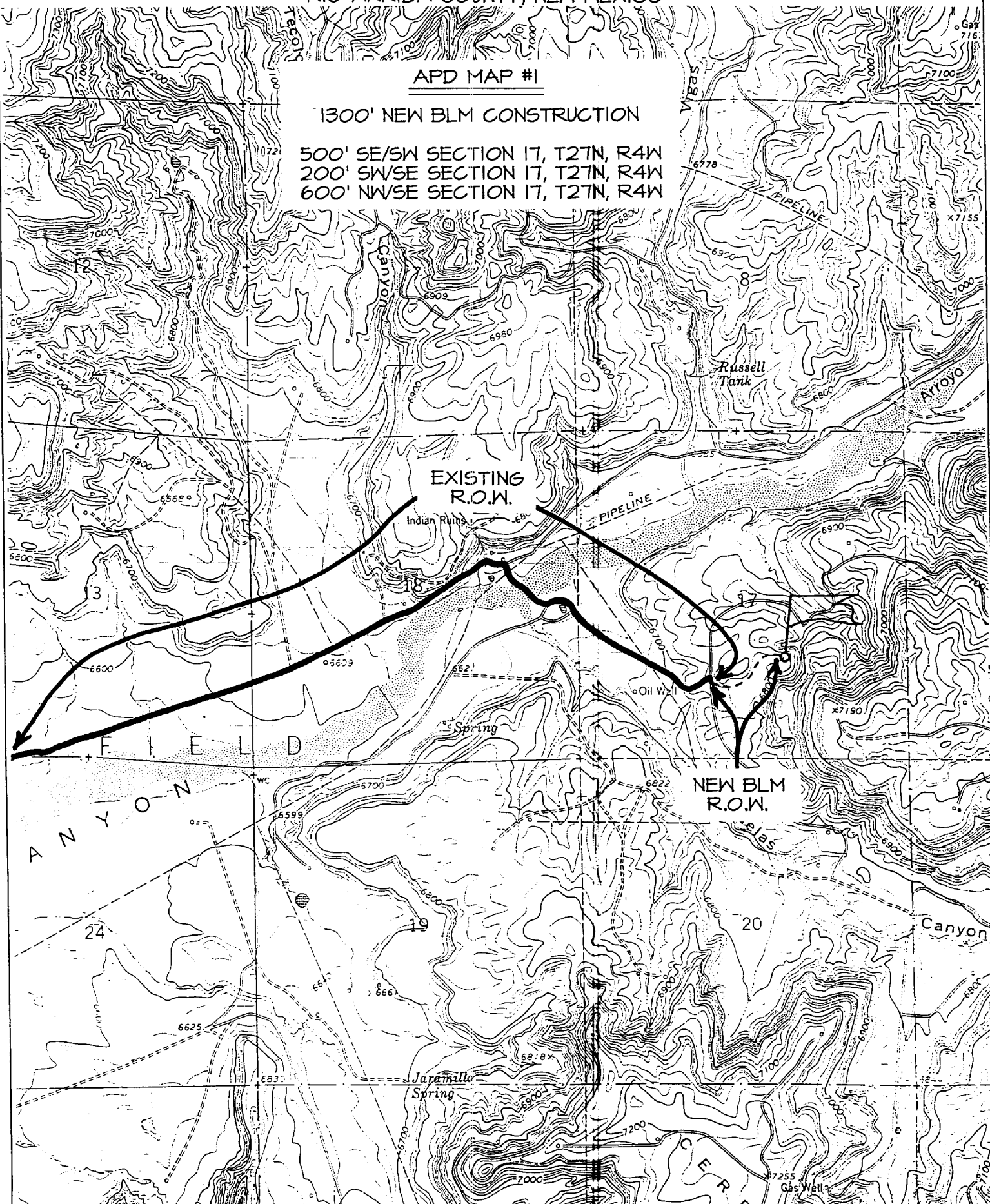
BURLINGTON RESOURCES OIL & GAS COMPANY SAN JUAN 27-4 UNIT #43M

1605' FSL & 1935' FEL, SECTION 17, T27N, R4W, N.M.P.M.
RIO ARriba COUNTY, NEW MEXICO

APD MAP #1

1300' NEW BLM CONSTRUCTION

500' SE/SW SECTION 17, T27N, R4W
200' SW/SE SECTION 17, T27N, R4W
600' NW/SE SECTION 17, T27N, R4W



OPERATIONS PLAN

Well Name: San Juan 27-4 Unit #43M
Location: 1605' FSL, 1935' FEL, Sec 17, T-27-N, R-4-W
Rio Arriba County, NM
Latitude 36° 34.2, Longitude 107° 16.3
Formation: Blanco Mesaverde/Basin Dakota
Elevation: 6780' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	3032'	
Ojo Alamo	3032'	3142'	aquifer
Kirtland	3142'	3267'	gas
Fruitland	3267'	3612'	gas
Pictured Cliffs	3612'	3707'	gas
Lewis	3707'	4187'	gas
Intermediate TD	3807'		
Mesa Verde	4187'	4602'	gas
Chacra	4602'	5412'	gas
Massive Cliff House	5412'	5477'	gas
Menefee	5477'	5782'	gas
Massive Point Lookout	5782'	6342'	gas
Mancos	6342'	6972'	gas
Gallup	6972'	7762'	gas
Greenhorn	7762'	7822'	gas
Graneros	7822'	7867'	gas
Dakota	7867'		gas
TD	8080'		

Logging Program:

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- 3807'	LSND	8.4-9.0	30-60	no control
3807- 8080'	Gas	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>Csq. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	WC-50
8 3/4"	0' - 3807'	7"	20.0#	J-55
6 1/4"	3707' - 8080'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 8080' 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 #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/356 sx Class "B" cement 3% sodium metasilicate, 5 pps Gilsonite and 0.5 pps flocele. Tail w/90 sx Class "B" 50/50 poz w/2% gel, 2% calcium chloride, 5 pps Gilsonite, 0.5 pps Flocele (1145 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.

7" intermediate casing alternative two stage: Stage collar at 3167'. First stage: cement with w/153 sx Class "B" w/3% sodium metasilicate, 5 pps gilsonite, 0.5 pps Flocele. Second stage: 328 sx Class "B" with 2% gel, 2% calcium chloride, 5 pps Gilsonite, 0.5 pps Flocele (1145 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 3142'. Two turbolating centralizers at the base of the Ojo Alamo at 3142'. 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 446 sx 50/50 Class "B" Poz with 2% gel, 0.25 pps flocele, 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 shoe joint.

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:

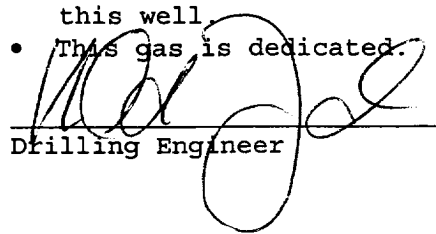
- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite 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 dualled.
- 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 east half of Section 17 is dedicated to the Mesaverde and Dakota in this well.
- This gas is dedicated.


Drilling Engineer

10/3/2000
Date