

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 <del>NMNM-078919</del> NM5F-078919 Unit Reporting Number 8910016500
1b. Type of Well GAS	6. If Indian, All. or Tribe
2. Operator <b>BURLINGTON RESOURCES</b> 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 11B
4. Location of Well 455' FSL, 680' FWL, SWSW Latitude 36° 44.9, Longitude 107° 33.9 Bottom Hole Location: 1780' FSL, 2390' FWL, NESW	10. Field, Pool, Wildcat Blanco Mesaverde 11. Sec., Twn, Rge, Mer. (NMPM) M Sec. 3, T-29-N, R-7-W API # 30-039- 27035
14. Distance in Miles from Nearest Town 16.3 miles from Blanco	12. County Rio Arriba 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 455'	17. Acres Assigned to Well 317.83 W/2
16. Acres in Lease DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".	18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 21'
19. Proposed Depth TVD: 5671', MD: 6376'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6234' 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 <u>5-13-02</u>

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY /s/ David J. Markiewicz TITLE \_\_\_\_\_ DATE JUL 25

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.

HOLD C104 FOR Directional Survey

NMOCD

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102

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 30-039- <b>27035</b>	<sup>2</sup> Pool Code 72319	<sup>3</sup> Pool Name Blanco Mesaverde
<sup>4</sup> Property Code 7465	<sup>5</sup> Property Name SAN JUAN 29-7 UNIT	<sup>6</sup> Well Number 11B
<sup>7</sup> GRID No. 14538	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL & GAS INC.	<sup>9</sup> Elevation 6234

<sup>10</sup> Surface Location

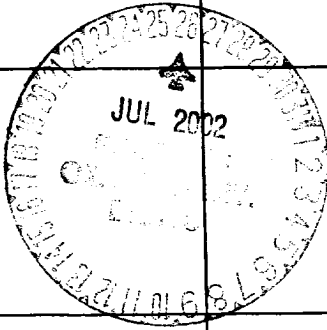
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	3	29-N	7-W		455	SOUTH	680	WEST	RIO ARRIBA

<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
K	3	29-N	7-W		1780	SOUTH	2390	WEST	RIO ARRIBA


<sup>12</sup> Dedicated Acres MV - W/317.83	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

<sup>16</sup> FD 2 1/2" GLO 1913 BRASS CAP LOT 8 ✓		✓ LOT 7		LOT 6		LOT 5	
NMSF-078945							
N 00°07'12" W 5253.92' (M)							
USA SF-078919 NYE, C H, ET UX				BOTTOM HOLE LOCATION ○			
680'		885'		LAT: 36°44.9' N. LONG: 107°33.9' W.			
FD 2 1/2" GLO 1913 BRASS CAP		644'		N 89°57' W 5297.16' (R)			
455'				CALC'D CORNER			


<sup>17</sup> 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  
5-7-02  
Date

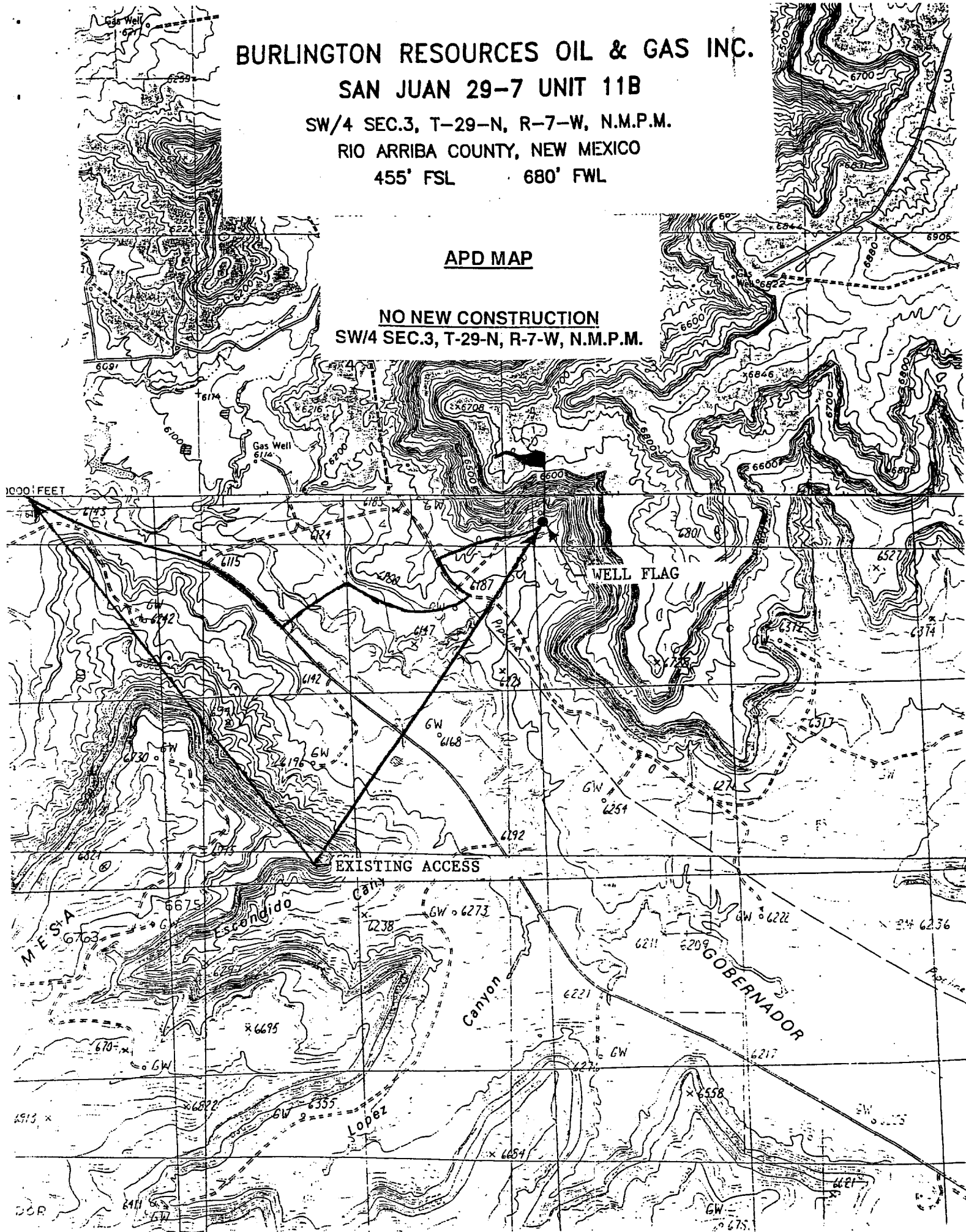
<sup>18</sup> SURVEYOR CERTIFICATION

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.

7-25-02  
Date of Survey  
  
Signature and Seal of Professional Surveyor  
ROY A. RUSH  
REGISTERED PROFESSIONAL LAND SURVEYOR  
8894  
Certificate Number

455' FSL      680' FWL

**NO NEW CONSTRUCTION**  
**SW/4 SEC.3, T-29-N, R-7-W, N.M.P.M.**



## OPERATIONS PLAN

Well Name: San Juan 29-7 Unit #11B  
Location: 455' FSL, 680' FWL, Section 3, T-29-N, R-7-W  
Rio Arriba County, New Mexico  
Latitude 36° 44.9, Longitude 107° 33.9  
Bottom hole Location: 1780' FSL, 2390' FWL, Section 3, T-29-N, R-7-W  
Formation: Blanco Mesaverde  
Elevation: 6234' GL

<u>Formation Tops:</u>	<u>Measured Depth</u>	<u>Top True Vertical Depth</u>	<u>Bottom True Vertical Depth</u>	<u>Contents</u>
Surface	San Jose	San Jose	2116'	
Ojo Alamo	2508'	2116'	2266'	aquifer
Kirtland	2715'	2266'	2616'	gas
Fruitland	3215'	2616'	3081'	gas
Pictured Cliffs	3764'	3081'	3186'	gas
Lewis	3879'	3186'	3816'	gas
Intermediate casing	4138'	3436'		
Huerfanito Bentonite	4520'	3816'	4101'	gas
Chacra	4805'	4101'	4836'	gas
Cliff House	5540'	4836'	4936'	gas
Menefee	5640'	4936'	5271'	gas
Point Lookout	5975'	5271'	5671'	gas
Total Depth	6376' MD	5671' TVD		

### Logging Program:

Cased hole - CBL-GR - TD to surface

### Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 200'	Spud	8.4-8.9	40-50	no control
0- 4138' MD	Non-dispersed	8.4-9.0	30-60	less than 8
4138- 6327' MD	air/mist	n/a	n/a	n/a

### Drilling:

#### Surface:

Drill to surface casing point of 200' and set 9 5/8" casing.

#### Intermediate:

Mud drill to the kick off point of 300'. At this point, the well will be directionally drilled by building 3.5 degrees per 100' with an azimuth of 53 degrees. The end of the build will be at a TVD of 1450', a MD of 1575, VS of 472', and an angle of 45 degrees. This angle will be held at an azimuth of 53 degrees until 2570' TVD, and 3148' MD. The angle will then be dropped at 3.5 degrees per 100' at an azimuth of 53 degrees until intermediate casing point of 3436' TVD, 4138' MD, and 10 degrees inclination.

#### Production Hole:

The production hole will be drilled with an air hammer. It will drill out at intermediate casing point and fall at approximately 2 to 3 degrees per 100 feet and be vertical at a TC of 5671' TVD and 6376' TMD.

**Materials:****Casing Program:**

<u>Hole Size</u> <u>(inches)</u>	<u>Measured</u> <u>Depth (ft)</u>	<u>TVD (ft)</u>	<u>Casing</u> <u>Size (in)</u>	<u>Weight</u> <u>(lbs/ft)</u>	<u>Grade</u>
12 1/4"	200'	200'	9 5/8"	32.3	H-40
8 3/4"	4138'	3436'	7"	20.0	J-55
6 1/4"	6376'	5671'	4 1/2"	10.5	J-55

**Casing Equipment:**

9 5/8" surface casing - sawtooth guide shoe.

7" intermediate casing - cement nose guide shoe on bottom, float collar one joint off bottom. Centralizers spaced as follows: (25) spaced every fourth joint from bottom to surface. Two turbolizing type centralizers, one below and one into the Ojo Alamo at 2593' TMD.

4 1/2" production casing - float shoe on bottom, float collar, 6327' of 4 1/2" 10.5# J-55 ST&C csg.

**Tubing:**

6327' of 2 3/8", 4.7#, J-55 8rd EUE tubing with seating nipple one joint off bottom and an expendable check valve on bottom.

**Wellhead Equipment:**

9 5/8" x 7" x 2 3/8" - 11" (2000 psi) wellhead assembly.

**Cementing**

9 5/8" surface casing - cement with 134 sx Type III cement with 0.25 pps cellophane 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.

**7" intermediate casing -**

Lead w/380 sx Premium Lite cement w/3% calcium chloride, 0.25 pps Flocele, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate. Tail w/90 sx Type III cement w/1% calcium chloride, 0.25 pps Flocele, 0.2% fluid loss (933 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 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 3115'. First stage: lead with w/50 sx Premium Lite cement w/3% calcium chloride, 0.25 pps Flocele, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate. Tailed w/90 sx Type III cement w/1% calcium chloride, 0.25 pps Flocele, 0.2% fluid loss. Second stage: cement with 330 sx Premium Lite cement w/3% calcium chloride, 0.25 pps Flocele, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate (933 cu.ft., 50% excess to circulate to surface).

4 1/2" production casing - cement with 411 sx Premium Lite HS FM cement w/0.3% CD-32, 6.25 pps LCM-1, 0.25% Flocele, 0.1% fluid loss (335 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.

#### BOP and Tests

Surface to intermediate TD - 11", 2000 psi double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test rams and casing to 700 psi for 30 minutes.

Intermediate TD to Total Depth - 10" nominal, 2000 psi (minimum) double gate BOP stack (Reference Figure #1). Prior to drilling out intermediate casing, test rams and casing to 1500 psi (minimum) for 30 minutes.

Surface to Total Depth - choke manifold (Reference Figure #2).

Pipe rams will be actuated at least once each day and blind rams will be actuated once each trip to test proper functioning. A kelly cock valve and drill string safety valves to fit each drill string will be maintained and available on the rig floor.

#### Additional Information:

- The Mesaverde 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.
- The west half of Section 3 is dedicated to the Mesaverde in this well.
- This gas is dedicated.

Brennan D. Shurt  
Drilling Engineer

5/13/2002  
Date