

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-03862 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 San Juan 28-4 Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name San Juan 28-4 Unit 9. Well Number 1A	
4. Location of Well 1785' FNL, 2515' FWL Latitude 36° 39.9, Longitude 107° 17.5	10. Field, Pool, Wildcat Blanco Mesaverde 11. Sec., Twn, Rge, Mer. (NMMPM) Sec. 18, T-28-N, R-4-W API # 30-039-26465	
14. Distance in Miles from Nearest Town 11 miles from Gobernador	12. County Rio Arriba	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1785'	17. Acres Assigned to Well 319.48 N/2	
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 1900'	20. Rotary or Cable Tools Rotary	
19. Proposed Depth 7000'	21. Elevations (DF, FT, GR, Etc.) 7518' GR	
23. Proposed Casing and Cementing Program See Operations Plan attached	22. Approx. Date Work will Start	
24. Authorized by: <u>[Signature]</u> Regulatory/Compliance Supervisor	5-3-00 Date	

PERMIT NO. \_\_\_\_\_

APPROVAL DATE \_\_\_\_\_

APPROVED BY /s/ Jim Lovato

TITLE Team Lead, Petroleum Management

DATE AUG - 8 2000

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.

NMOC

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

<sup>1</sup> API Number 30-039-26465		<sup>2</sup> Pool Code 72319	<sup>3</sup> Pool Name Blanco Mesaverde
<sup>4</sup> Property Code 7459	<sup>5</sup> Property Name SAN JUAN 28-4 UNIT		<sup>6</sup> Well Number 1A
<sup>7</sup> OGRID No. 14538	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY		<sup>9</sup> Elevation 7518

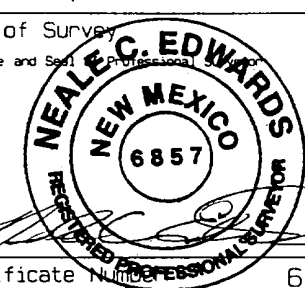
#### <sup>10</sup> Surface Location

<sup>10</sup> UL or lot no. F	<sup>11</sup> Section 18	<sup>12</sup> Township 28N	<sup>13</sup> Range 4W	<sup>14</sup> Lot Idn	<sup>15</sup> Feet from the 1785	<sup>16</sup> North/South line NORTH	<sup>17</sup> Feet from the 2515	<sup>18</sup> East/West line WEST	<sup>19</sup> County RIO ARriba
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#### <sup>11</sup> Bottom Hole Location If Different From Surface

<sup>20</sup> UL or lot no.	<sup>21</sup> Section	<sup>22</sup> Township	<sup>23</sup> Range	<sup>24</sup> Lot Idn	<sup>25</sup> Feet from the	<sup>26</sup> North/South line	<sup>27</sup> Feet from the	<sup>28</sup> East/West line	<sup>29</sup> County
<sup>30</sup> Dedicated Acres N/319.48					<sup>31</sup> Joint or Infill	<sup>32</sup> Consolidation Code	<sup>33</sup> 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

<sup>34</sup> 1310.76'	<sup>35</sup> 1320.00'	<sup>36</sup> 2640.00'	<sup>37</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  <i>Peggy Cole</i> Signature <u>Peggy Cole</u> Printed Name <u>Regulatory Supervisor</u> Title <u>5-3-00</u> Date  <sup>38</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.  MARCH 3, 2000 Date of Survey Signature and Seal of Professional Surveyor  Certificate Number 6857
LOT 1			
2515'		USA NM-03862	
LOT 2	LAT: 36°39.9'N LONG: 107°17.5'W		
5280.00'		18	
LOT 3			
LOT 4			
1313.40'	1320.00'	2640.00'	

1785' FNL & 2515' FWL, SECTION 18, T28N, R4W, N.M.P.M.  
RIO ARRIBA COUNTY, NEW MEXICO

100' NEW FOREST SERVICE CONSTRUCTION  
SE/NW SECTION 18, T28N, R4W

EXISTING  
R.O.W.

NEW FOREST  
R.O.W.

MESA

## OPERATIONS PLAN

**Well Name:** San Juan 28-4 Unit #1A  
**Location:** 1785' FNL, 2515' FWL, Section 18, T-28-N, R-4-W  
Rio Arriba County, New Mexico  
Latitude 36° 39.9, Longitude 107° 17.5  
**Formation:** Blanco Mesa Verde  
**Elevation:** 7518' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	3880'	
Ojo Alamo	3880'	4069'	aquifer
Kirtland	4069'	4324'	
Fruitland	4324'	4531'	gas
Pictured Cliffs	4531'	4651'	gas
Lewis	4651'	5514'	gas
Intermediate TD	4751'		
Chacra	5514'	6316'	gas
Massive Cliff House	6316'	6370'	gas
Menefee	6370'	6697'	gas
Point Lookout	6697'	6914'	gas
Mancos	6914'		
Total Depth	7000'		

### Logging Program:

Mud Logs/Coring/DST -  
Mud logs - none  
Coring - none  
DST - none  
Wireline - Platform Express - 4500' to TD  
Cased hole - Gamma Ray, Cement bond - 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- 4751'	LSND	8.4-9.0	30-60	no control
4751- 7000'	Air/Mist	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>Measured Depth</u>	<u>Csq Size</u>	<u>Weight</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	H-40
8 3/4"	0' - 4000'	7"	20.0#	J-55
8 3/4"	4000' - 4751'	7"	23.0#	J-55
6 1/4"	4651' - 7000'	4 1/2"	10.5#	J-55

**Tubing Program:** 0' - 7000' 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 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/447 sx Class "B" w/3% sodium metasilicate, 5# gilsonite/sx and 0.5# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/6% gel, 2% calcium chloride, 5# gilsonite/sx and 0.25# flocele/sx (1429 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 to determine TOC. Test casing to 1500 psi for 30 minutes.

7" intermediate casing alternative two stage: Stage collar at 4224'. First stage: cement with 243 sx Class "B" 50/50 poz w/2% gel, 7 pps Gilsonite, 1% calcium chloride, 0.5 pps Cellophane. Second stage: 248 sx Class "B" with 3% sodium metasilicate, 1/2 pps Cellophane, 7 pps Gilsonite (1429 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 4069'. Two turbolating centralizers at the base of the Ojo Alamo at 4069'. 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 266 sx 50/50 Class "B" Poz w/1/4# flocele/sx, 2% gel, 0.1% retardant, 5# gilsonite/sx and 0.4% fluid loss additive (338 cu.ft., 40% excess to circulate liner top). WOC a minimum of 18 hrs prior to completing.

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):

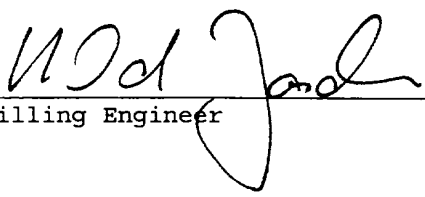
The following equipment will be operational while gas/mist drilling:

- 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.
- 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 north half of Section 18 is dedicated to the Mesa Verde.
- This gas is dedicated.

  
Drilling Engineer

5/16/2000  
Date