

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 SF-078511 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 Quinn 9. Well Number #4B
4. Location of Well 735' FNL, 2330' FEL Latitude 36° 53.3, Longitude 107° 42.9	10. Field, Pool, Wildcat Blanco Mesa Verde 11. Sec., Twn, Rge, Mer. (NMPM) B Sec. 19, T-31-N, R-8-W API # 30-045-30129
14. Distance in Miles from Nearest Town 10 mi from Navajo Dam	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 735'	
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 1000'	
19. Proposed Depth 5962'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6430' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Peggy Cole</u> Regulatory/Compliance Administrator	<u>1-11-00</u> Date

PERMIT NO. \_\_\_\_\_ APPROVAL DATE 9/8/00  
APPROVED BY \_\_\_\_\_ TITLE PE DATE 9/8/00

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.

11000

## OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, NM 87504-2088

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-045-30124		<sup>2</sup> Pool Code 72319	<sup>3</sup> Pool Name Blanco Mesaverde	
<sup>4</sup> Property Code 74078	<sup>5</sup> Property Name QUINN			<sup>6</sup> Well Number 4B
<sup>7</sup> OGRID No. 14538	<sup>8</sup> Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			<sup>9</sup> Elevation 6430'

### <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
B	19	31-N	8-W		735	NORTH	2330	EAST	SAN JUAN

## 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 E/320		13 Joint or Intm I			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

<p>16</p> <p>FD. B.L.M. BC. W.C. 1954</p>	<p>N 89-37-50 W 2587.8'</p> <p>FD. B.L.M. BC. 1954</p>	<p>17</p> <h3 style="text-align: center;">OPERATOR CERTIFICATION</h3> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <div style="border-top: 1px solid black; padding-top: 5px;"> <p style="font-size: 1.2em; font-family: cursive;">Peggy Cole</p> <p>Signature</p> </div> <div style="border-top: 1px solid black; padding-top: 5px;"> <p>Peggy Cole</p> <p>Printed Name</p> </div> <div style="border-top: 1px solid black; padding-top: 5px;"> <p>Regulatory Administrator</p> <p>Position</p> </div> <div style="border-top: 1px solid black; padding-top: 5px;"> <p>1-11-00</p> <p>Date</p> </div>
<p>19</p> <p>SF-07E511</p> <p>FD. B.L.M. BC. 1954</p>	<p>N 01-51-16 W 5232.36'</p>	<p>18</p> <h3 style="text-align: center;">SURVEYOR CERTIFICATION</h3> <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> <div style="border-top: 1px solid black; padding-top: 5px;"> <p>11-79</p> <p>Date of Survey</p> </div> <div style="border-top: 1px solid black; padding-top: 5px;"> <p>Signature and Seal of Professional Surveyor</p> </div> <div style="text-align: center; margin-top: 20px;"> <p style="font-size: 1.5em;">8894</p> <p>Certificate Number</p> </div>

# BURLINGTON RESOURCES OIL & GAS COMPANY

QUINN No. 4B

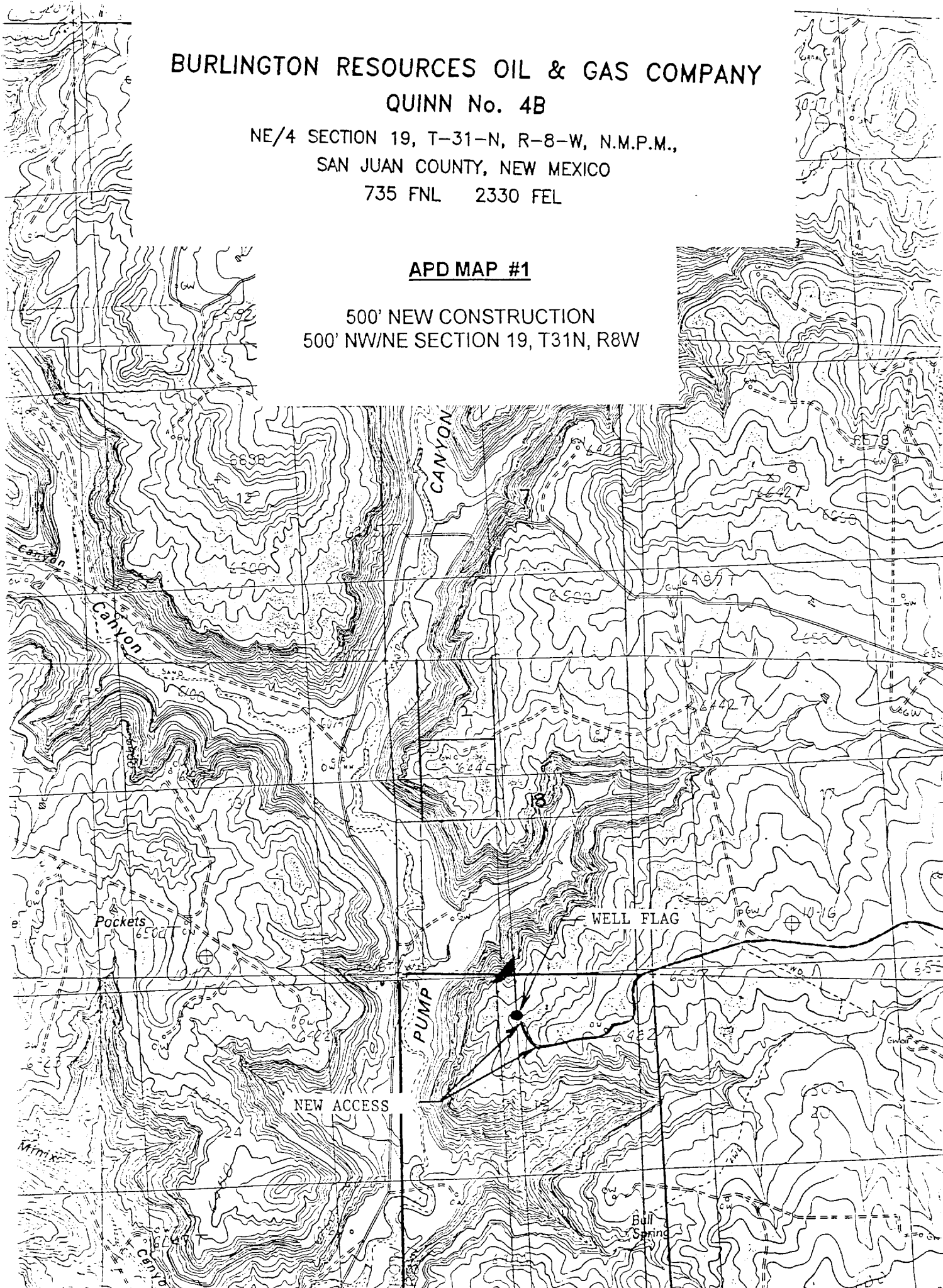
NE/4 SECTION 19, T-31-N, R-8-W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

735 FNL 2330 FEL

## APD MAP #1

500' NEW CONSTRUCTION  
500' NW/NE SECTION 19, T31N, R8W



## OPERATIONS PLAN

Well Name: Quinn #4B  
Surface Location: 735'FNL, 2330'FEL, Section 19, T-31-N, R-8-W  
San Juan County, New Mexico  
Latitude 36° 53.3, Longitude 107° 42.9

Formation: Blanco Mesa Verde  
Elevation: 6430'GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	2052'	aquifer
Ojo Alamo	2052'	2117'	aquifer
Kirtland	2117'	2767'	gas
Fruitland	2767'	3287'	gas
Pictured Cliffs	3287'	3393'	gas
Lewis	3393'	4042'	gas
Intermediate TD	3493'		
Mesa Verde	4042'	4407'	gas
Chacra	4407'	5197'	gas
Massive Cliff House	5197'	5242'	gas
Menefee	5242'	5562'	gas
Point Lookout	5562'		gas
Total Depth	5962'		

Logging Program:  
Cased hole logging - Gamma Ray, Cement bond from surface to TD  
Mud Logs/Coring/DST - none

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- 3493'	LSND	8.4-9.0	30-60	no control
3493- 5962'	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' - 3493'	7"	20.0#	J-55
6 1/4"	3393' - 5962'	4 1/2"	10.5#	J-55

Tubing Program: 0' -5962'-- 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.

BOP Specifications, Wellhead and Tests (cont'd):**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/318 sx Class "B" w/3% sodium metasilicate, 7# gilsonite/sx and 0.5# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% gel, 2% calcium chloride, 7# gilsonite/sx and 0.5# flocele/sx (1051 cu.ft. of slurry, 60% 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 2667'. First stage: cement with 184 sx Class "B" cmt with 7 pps gilsonite, 1/2 pps cellophane, 3% sodium metasilicate. Second stage: 274 sx Class "B" with 3% sodium metasilicate, 1/2 pps Cellophane, 7 pps Gilsonite (1051 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 2117'. Two turbolating centralizers at the base of the Ojo Alamo at 2117'. 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 291 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 (369 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):

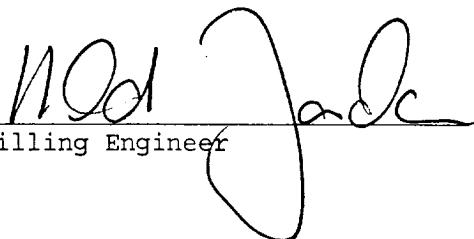
The following equipment will be operational while gas/mist drilling:

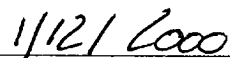
- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite 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	800 psi
Pictured Cliffs	800 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 19 is dedicated to the Mesa Verde.
- This gas is dedicated.

  
Drilling Engineer

  
Date