

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-078129
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

3. Address & Phone No. of Operator
PO Box 4289, Farmington, NM 87499
(505) 326-9700

8. Farm or Lease Name
Pierce
9. Well Number
#1B

4. Location of Well
1480' FNL, 2295' FEL
Latitude 36° 48.9, Longitude 107° 48.2

10. Field, Pool, Wildcat
Blanco Mesaverde/Basin Dakota
11. Sec., Twn, Rge, Mer. (NMPM)
G Sec. 17, T-30-N, R-9-W
API # 30-045-30433

14. Distance in Miles from Nearest Town
12 miles from Aztec

12. County
San Juan
13. State
NM

15. Distance from Proposed Location to Nearest Property or Lease Line
1480'

16. Acres in Lease

17. Acres Assigned to Well
320 N/2

18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease
500'

19. Proposed Depth
7580' —

This well is subject to a mineral and
probational royalty payment of \$165.3
and a 10% royalty of \$165.4.

20. Rotary or Cable Tools
Rotary

21. Elevations (DF, FT, GR, Etc.)
6241' GR —

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program
See Operations Plan attached

PERMIT TO DRILL, DEEPEN, OR PLUG BACK ARE
FOR INFORMATION ONLY WITH ATTACHED
"GENERAL REQUIREMENTS"

24. Authorized by: Deputy Case
Regulatory/Compliance Supervisor

Date 11-9-00

PERMIT NO. _____

APPROVAL DATE 7/6/01

APPROVED BY /s/ Lee Otterli

TITLE _____

DATE _____

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 NSL in Dakota

RECEIVED

KJ

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

¹ API Number 30-045-30433	² Pool Code 72319/71599	³ Pool Name Blanco Mesaverde/Basin Dakota
⁴ Property Code 7388	⁵ Property Name PIERCE	⁶ Well Number 1B
⁷ GRID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY	⁹ Elevation 6241'

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
G	17	30N	9W		1480	NORTH	2295	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 MV/DK: N/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><p>16</p><p>5223.90'</p><p>1480'</p><p>2295'</p><p>5248.32'</p><p>5225.88'</p><p>5261.52'</p><p>17</p><p>LAT: 36°48.9'N LONG: 107°48.2'W</p><p>US-SF-078129</p><p>JUL 2001 RECEIVED OIL CON. DIV. DIST. 3</p></div>	<p>¹⁷ OPERATOR CERTIFICATION</p> <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> Signature Peggy Cole Printed Name Regulatory Supervisor Title 11-9-00 Date</p>
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <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>SEPTEMBER 27, 2000 Date of Survey <i>NEALE C. EDWARDS</i> Signature and Seal of Professional Surveyor Certificate No. 6857</p>

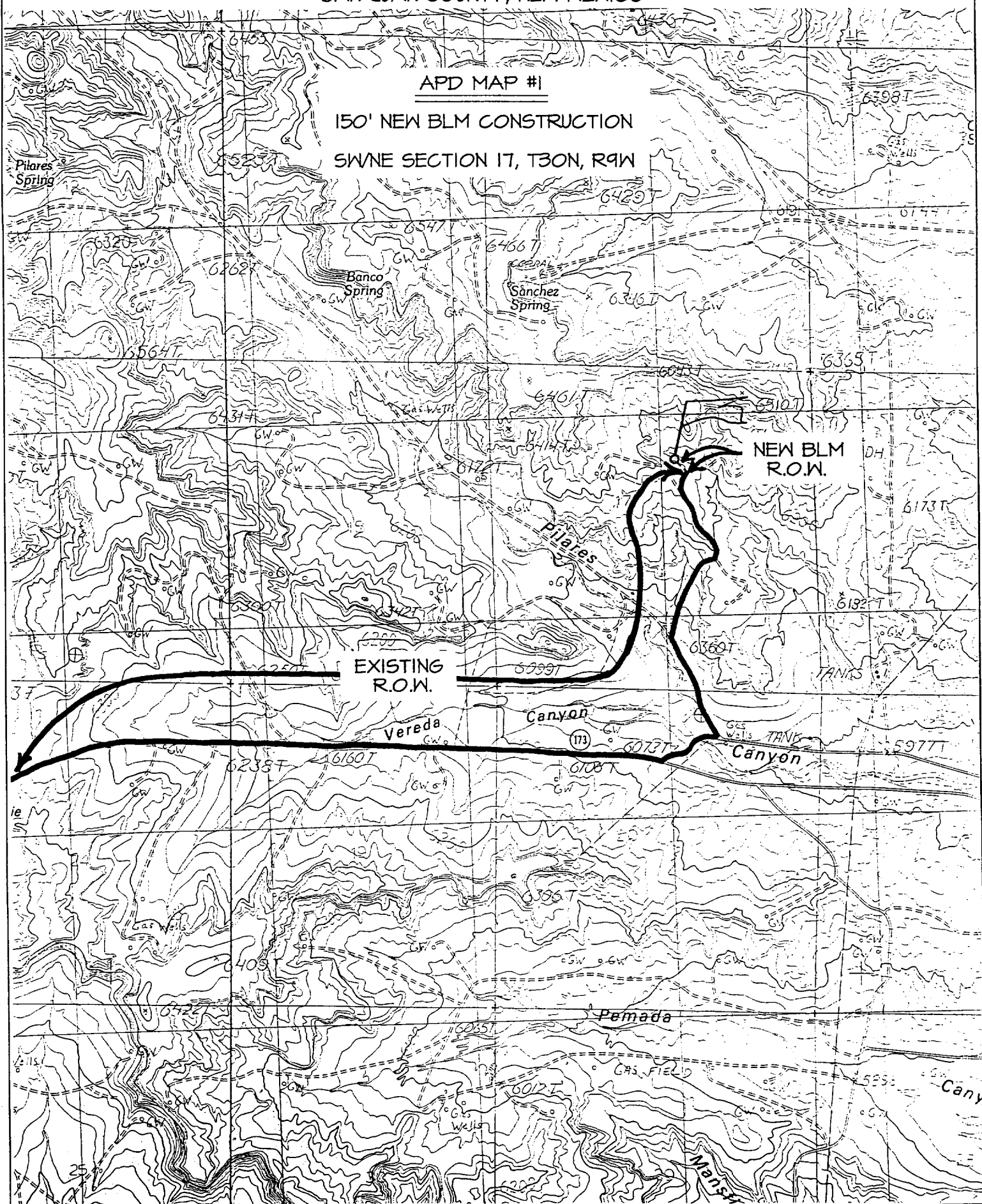
BURLINGTON RESOURCES OIL & GAS COMPANY PIERCE #1B

1480' FNL & 2295' FEL, SECTION 17, T30N, R9W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

APD MAP #1

150' NEW BLM CONSTRUCTION

SWNE SECTION 17, T30N, R9W



OPERATIONS PLAN

Well Name: Pierce #1B
Location: 1480' FNL, 2295' FEL, Sec 17, T-30-N, R-9-W
San Juan County, NM
Latitude 36° 48.9, Longitude 107° 48.2
Formation: Blanco Mesa Verde/Basin Dakota
Elevation: 6241' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1668'	
Ojo Alamo	1668'	1793'	aquifer
Kirtland	1793'	2328'	gas
Fruitland	2328'	2968'	gas
Pictured Cliffs	2968'	3138'	gas
Lewis	3138'	3683'	gas
Intermediate TD	3238'		
Mesa Verde	3683'	3998'	gas
Chacra	3998'	4593'	gas
Massive Cliff House	4593'	4778'	gas
Menefee	4778'	5178'	gas
Massive Point Lookout	5178'	5573'	gas
Mancos	5573'	6485'	gas
Gallup	6485'	7215'	gas
Greenhorn	7215'	7268'	gas
Graneros	7268'	7306'	gas
Dakota	7306'		gas
TD	7580'		

Logging Program:

Open hole - Array induction, TEMP, Neutron-Density - TD to intermediate casing.
Cased hole - GR/CBL - 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- 3238'	LSND	8.4-9.0	30-60	no control
3238- 7580'	Air/N2	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>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 200'	9 5/8"	32.3#	WC-50
8 3/4"	0' - 3238'	7"	20.0#	J-55
6 1/4"	0' - 7580'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 7580' 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 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/337 sx Class "G" w/3% sodium metasilicate, 2% calcium chloride, 10# gilsonite/sx and 1/2# flocele/sx. Tail w/90 sx 50/50 Class "G" Poz w/2% calcium chloride, 2% gel, 1/4 pps flocele, 5 pps gilsonite (984 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 2228'. First stage: cement with 237 sx 50/50 Class "G" Poz w/2% calcium chloride, 2% gel, 1/4 pps flocele, 5 pps gilsonite. Second stage: 264 sx Class "G" w/3% sodium metasilicate, 2% calcium chloride, 10# gilsonite/sx and 1/2# flocele/sx (984 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 1793'. Two turbolating centralizers at the base of the Ojo Alamo at 1793'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Casing -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 443 sx 50/50 Class "G" Poz with 5% gel, 0.25# flocele/sx, 5# gilsonite/sx, 0.1% retardant and 0.25% fluid loss additive (638 cu.ft.), 40% excess to cement 4 1/2" x 7" overlap). 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 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 Dakota and Mesa Verde formations will be completed and commingled.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	150 psi
Pictured Cliffs	180 psi
Mesa Verde	260 psi
Dakota	950 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The north half of Section 17 is dedicated to the Mesaverde and Dakota in this well.
- This gas is dedicated.


Drilling Engineer

11/17/00
Date