

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED

1a. Type of Work DRILL	5. Lease Number NMNM01614 Unit Reporting Number 070 Farmington, NM
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 Thompson 9. Well Number 104
4. Location of Well 1585' FNL, 775' FEL Latitude 36° 51.5154, Longitude 108° 04.7400	10. Field, Pool, Wildcat Basin Fruitland Coal 11. Sec., Twn, Rge, Mer. (NMPM) H Sec. 34, T-31-N, R-12-W API # 30-045- 31575
14. Distance in Miles from Nearest Town 6.5 miles to Flora Vista P.O.	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 775'	
16. Acres in Lease	17. Acres Assigned to Well 320 EP
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 21'	
19. Proposed Depth 2640'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6038' GR	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 Supervisor	Date <u>3-12-03</u>

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY Original Signed: Stephen Mason TITLE APM DATE MAY 06 2003

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.

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4

NMOCD

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 CopiesDISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, NM 87504-2088DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045- 31575		² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 18628	⁵ Property Name THOMPSON		⁶ Well Number 104
⁷ OGRID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS INC.		⁹ Elevation 6038

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
H	34	31-N	12-W		1585	NORTH	775	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 FTC - 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

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	<p>FD 3 1/4" BLM 1951 BRASS CAP</p>	<p>S 88°53'22" W 2626.4'(M)</p>	<p>FD 3 1/4" BLM 1951 BRASS CAP</p>	<p>S 00°08'02" W 2641.9'(M)</p>	<p>1585'</p>	<p>264'</p>	<p>538'</p>	<p>775'</p>	<p>1057'</p>	<p>34</p>	<p>LAT: 36°51.5154' N. (NAD 27) LONG: 108°04.7400' W. (NAD 27)</p>	OPERATOR CERTIFICATION	
												<p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p>	
<p>Signature: <u>Peggy Cole</u> Printed Name: <u>Peggy Cole</u> Title: <u>Regulatory Supervisor</u> Date: <u>3-12-03</u></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>Date of Survey: <u>2-12-03</u> Signature and Seal of Professional Surveyor: <u>[Signature]</u> Certificate Number: <u>14827</u></p>													

RECEIVED

OPERATIONS PLAN

Well Name: Thompson #104
Location: 1585' FNL, 775' FEL Section 34, T-31-N, R-12-W
San Juan County, NM
Formation: Basin Fruitland Coal
Elevation: 6038' GR

Formation:	Top	Bottom	Contents
Surface	San Jose	787'	
Ojo Alamo	787'	836'	aquifer
Kirtland	836'	2060'	
Fruitland	2060'	2438'	gas
B/Basal Coal	2438'	2440'	gas
Pictured Cliffs	2440'	2640'	gas
Total Depth	2640'		

Logging Program: Cased hole: GR/DEN/CAL - TD to surface

Mudlog: none

Coring Program: none

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 120'	Spud	8.4-9.0	40-50	no control
120-2640'	Non-dispersed	8.4-9.5	30-60	no control

Casing Program (as listed, the equivalent, or better):

Hole Size	Depth Interval	Csg. Size	Wt.	Grade
8 3/4"	0' - 120'	7"	20.0#	J-55
6 1/4"	0' - 2640'	4 1/2"	10.5#	J-55

Tubing Program:

0' - 2640'	2 3/8"	4.7#	J-55
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Float Equipment: 7" surface casing - saw tooth guide shoe. Centralizers will be run in accordance with Onshore Order #2.

4 1/2" production casing - guide shoe and self-fill float collar. Three centralizers run every other joint above shoe. Nine centralizers run every 3rd joint to the base of the Ojo Alamo @ 836'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 836'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

Wellhead Equipment: 7" x 4 1/2" x 2 3/8" x 11" 2000 psi screw on independent wellhead.

Cementing:

7" surface casing - cement with 38 sx Class "B" Type III cement with 0.25 pps Celloflake and 3% calcium chloride (54 cu.ft. of slurry, 200% excess to circulate to surface). WOC 24 hours for pre-set holes or 8 hours for conventionally set holes before pressure testing or drilling out from under surface casing. Test casing to 600 psi for 30 minutes.

4 1/2" production casing - Lead w/132 sx Premium Lite cement w/3% calcium chloride, 1/4 pps Cello-flake, 5 pps LCM-1, 0.4% FL-52, and 0.4% SMS. Tail w/90 sx Type III cement w/1% calcium chloride, 1/4 pps Cello-flake, and 0.2% FL-52 (406 cu.ft. of slurry, 50% excess to circulate to surface.) If cement is not circulated to surface, a temperature survey or CBL will be run during drilling or completion operations to determine TOC.

4-1/2" production casing alternative two stage - Stage collar@ 1960'. First stage: cement with 75 sxs Type III cmt w/1% calcium chloride, 0.25 pps flocele, 0.2% fluid loss. Second stage: 141 sxs Premium Lite cmt w/3% calcium chloride, 0.25 pps Flocele, 5 pps LCM-1, 0.4% fluid loss, 0.4% SMS (406 cu.ft. of slurry, 50% excess to circulate to surface).

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

BOP and tests:

Surface to TD - 11" 2000 psi (minimum double gate BOP stack (Reference Figure #1). Prior to drilling out surface casing, test rams to 600 psi/30 min.

Completion - 7 1/16" 2000 psi (minimum) double gate BOP stack (Reference Figure #2). Prior to completion operations, test rams and casing to 2000 psi/15 min.

From surface to TD - choke manifold (Reference Figure #3).

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

Additional information:

- * The Fruitland Coal formation will be completed and commingled.
- * Anticipated pore pressure for the Fruitland is 570 psi.
- * This gas is dedicated.
- * The east half of Section 34 is dedicated to the Fruitland Coal.


Drilling Engineer

3/18/03
Date