

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 NMSF-080781 Unit Reporting Number 070 Farmington, NM	
1b. Type of Well GAS	6. If Indian, All. or Tribe	
2. Operator <b>BURLINGTON</b> RESOURCES OIL & GAS COMPANY LP	7. Unit Agreement Name	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499  (505) 326-9700	8. Farm or Lease Name Cain 9. Well Number 724	
4. Location of Well 1845' FSL, 660' FWL  Latitude 36° 40.50, Longitude 107° 49.32	10. Field, Pool, Wildcat Basin Fruitland Coal 11. Sec., Twn, Rge, Mer. (NMPM) K Sec. 31, T-29-N, R-9-W API # 30-045-31577	
14. Distance in Miles from Nearest Town 11 miles from Bloomfield	12. County San Juan	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 660'	17. Acres Assigned to Well 251.01 S/2	
16. Acres in Lease	18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 700'	
19. Proposed Depth 2301'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 5809' GR	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u><i>David J. Mankiewicz</i></u> Regulatory/Compliance Supervisor	<u>3-10-03</u> Date	

PERMIT NO. \_\_\_\_\_  
APPROVED BY *David J. Mankiewicz*

APPROVAL DATE \_\_\_\_\_  
DATE APR 17 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".

NMOCD

This action is subject to technical and  
procedural review pursuant to 43 CFR 3165.2  
and appeal pursuant to 43 CFR 3165.4

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045- 31577		*Pool Code 71629	*Pool Name Basin Fruitland Coal
*Property Code 18487	*Property Name CAIN		*Well Number 724
*OGRID No. 14538	*Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY, LP		*Elevation 5809'

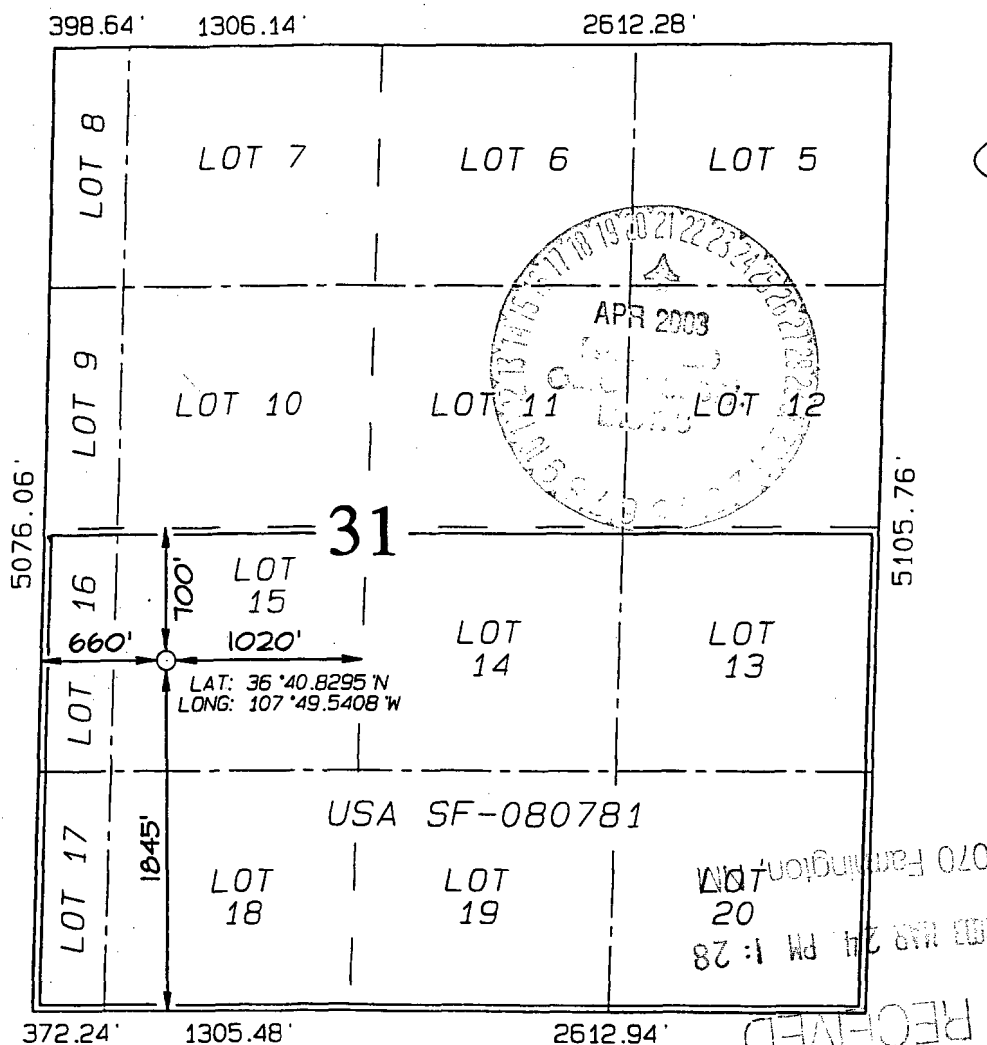
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	31	29N	9W		1845	SOUTH	660	WEST	SAN JUAN

<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
<sup>12</sup> Dedicated Acres					<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.		
ETC - S/251.01									

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



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

*Peggy Cole*

Signature  
Peggy Cole

Printed Name

Regulatory Supervisor  
Title


3-10-03  
Date

18 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.

Survey Date: JANUARY 16, 2003

Signature and Seal of Professional Surveyor



JASON C. EDWARDS  
Certificate Number 15269

## OPERATIONS PLAN

Well Name: Cain #724  
Location: 1845' FSL, 660' FWL Section 31, T-29-N, R-9-W  
Latitude 36° 40.8295, Longitude 107° 49.5408  
San Juan County, NM  
Formation: Basin Fruitland Coal  
Elevation: 5809' GL

Formation:	Top	Bottom	Contents
Surface	San Jose	974'	
Ojo Alamo	974'	1132'	aquifer
Kirtland	1132'	1763'	gas
Fruitland	1763'	2099'	gas
Base of Basal Coal	2099'	2101'	gas
Pictured Cliffs	2101'		gas
Total Depth	2301'		

Logging Program: Platform Express from TD to surface.

Mudlog: 1132' to TD.

Coring Program: none

### Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 120'	Spud	8.4-9.0	40-50	no control
120-2301'	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' - 2301'	4 1/2"	10.5#	J-55

### Tubing Program:

0' - 2301'	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 fourth joint above shoe. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 1132'. 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 xmas tree assembly.

**Cain #724**

**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/30 minutes.

4 1/2" production casing - lead w/108 sacks Premium Lite cement with 3% calcium chloride, 0.25 pps Celloflake, 5 pps LCM-1, 0.4% fluid loss, 0.4% sodium metasilicate. Tail with 90 sacks Type III cement with 1% calcium chloride, 0.25 pps Celloflake, 0.2% fluid loss (354 cu.ft., 50% excess to circulate to surface).

4 1/2" production casing alternative two stage: Stage collar 1663'. First stage: cement with w/71 sx Type III cmt w/1% calcium chloride, 0.25 pps Flocele, 0.2% fluid loss. Second stage: 120 sx Premium Lite cmt with 3% calcium chloride, 0.25 pps Flocele, 5 ps LCM-1, 0.4% fluid loss, 0.4% SMS (354 cu.ft., 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#/30 min.

Completion - 7 1/6" 2000 psi (minimum) double gate BOP stack (Reference Figure #2). Prior to completion operations, test blind rams and casing to 1500 psi for 30 minutes; all pipe rams and casing to 1500 psi for 30 minutes each.

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.
- \* Anticipated pore pressure for the Fruitland is 570 psi.
- \* This gas is dedicated.
- \* The south half of section 31 is dedicated to the Fruitland Coal.

Drilling Engineer: Jennifer McCarthy Date: 3/13/2003