

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-078707 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 Duke 9. Well Number #100
4. Location of Well 885' FNL, 1355' FEL Latitude 36° 54.3'N, Longitude 108° 09.0'W	10. Field, Pool, Wildcat Basin Fruitland Coal 11. Sec., Twn, Rge, Mer. (NMPM) B Sec. 13, T-31-N, R-13-W API # 30-045-30476
14. Distance in Miles from Nearest Town 8 miles from La Plata, NM.	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 885'	17. Acres Assigned to Well 320 E/2
16. Acres in Lease	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease No BRO&G well within 1 mile	
19. Proposed Depth 2129'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 5808' GR	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"
24. Authorized by: <u>Penny Cull</u> Regulatory/Compliance Supervisor	Date <u>12-8-00</u>

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY /s/ Jim Lovato TITLE _____ DATE FEB - 0

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.

114003

Shirley M. W.

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

P.O. 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 30-045-30476	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 27468	⁵ Property Name DUKE	⁶ Well Number 100
⁷ GRID No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS INC.	⁹ Elevation 5808'

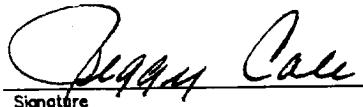
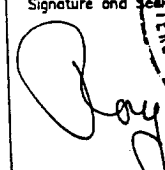
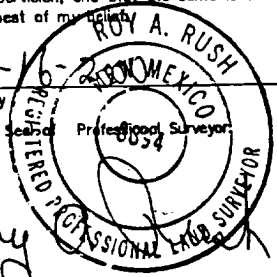
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	13	31-N	13-W		885	NORTH	1355	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 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

<div>16</div> <div>FD 3 1/2" BLM 1952 B.C.</div> <div>FD 3 1/2" BLM 1952 B.C.</div> <div>FD 3 1/2" BLM 1952 B.C.</div> <div>FD 3 1/2" BLM 1952 B.C.</div> <div>USA SF-078707</div>	<div>N 88-42-45° W 2625.81(M)</div> <div>885'</div> <div>LAT: 36°54.3' N LONG: 108°09.1' W</div> <div>1355'</div> <div>S 00-47-00° W 2827.88' (M)</div>	<div>17</div> <div>OPERATOR CERTIFICATION</div> <div>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</div> <div></div> <div>Signature Peggy Cole Printed Name Regulatory Supervisor Title Date 12-8-00</div>
	<div>18</div> <div>SURVEYOR CERTIFICATION</div> <div>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 knowledge</div> <div>10-16-2000</div> <div>Date of Survey</div> <div></div> <div>Signature and Seal of Professional Surveyor</div> <div></div> <div>8894</div> <div>Certificate Number</div>	

BURLINGTON RESOURCES OIL & GAS INC.

DUKE #100

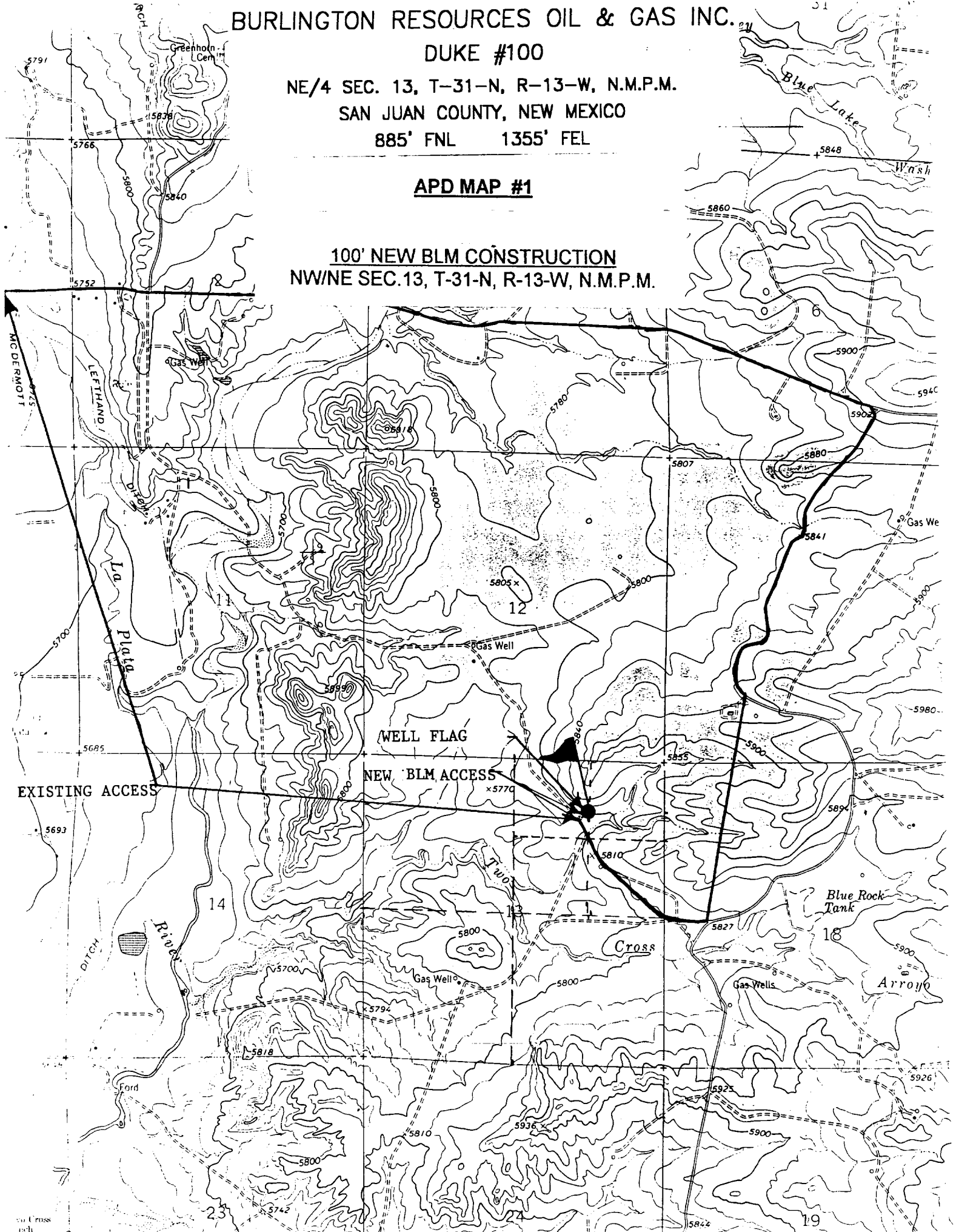
NE/4 SEC. 13, T-31-N, R-13-W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

885' FNL 1355' FEL

APD MAP #1

100' NEW BLM CONSTRUCTION
NW/NE SEC.13, T-31-N, R-13-W, N.M.P.M.



OPERATIONS PLAN

Well Name: Duke #100
Location: 885'FNL, 1355'FEL Section 13, T-31-N, R-13-W
Latitude 36° 54.3'N, Longitude 108° 09.0'W
San Juan County, NM
Formation: Basin Fruitland Coal
Elevation: 5808'GR

Formation:	Top	Bottom	Contents
Kirtland	Surface	1766'	
Fruitland	1766'	2116'	gas
Pictured Cliffs	2116'	2129'	gas
Total Depth	2129'		

Logging Program: Platform Express from TD to surface.
Mudlog: 2 Man unit from surface csg to TD.
Coring Program: none

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 120'	Spud	8.4-9.0	40-50	no control
120-2129'	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' - 2129'	4 1/2"	10.5#	K-55

Tubing Program:

0' - 2129'	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 - float shoe on bottom. Three centralizers run every other joint above shoe.

Wellhead Equipment: 7" x 4 1/2" x 2 3/8" x 11" 2000 psi xmas tree assembly.

Duke #100

Cementing:

7" surface casing - cement with 46 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (54 cu.ft. of slurry, 200% excess to circulate to surface). WOC 8 hrs. Test casing to 600 psi/30 minutes.

4 1/2" production casing - lead w/129 sacks Class "B" with 37#/sx blended silicalite, 3% bentonite, and 4% calcium chloride. Tail with 90 sacks 50/50 Class "B" Pozmix with 2% gel, 2% calcium chloride, 1/4#/sack flocele, 5 pps gilsonite (437 cu.ft., 100% 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 1000 psi.
- * This gas is dedicated.
- * The east half of section 13 is dedicated to the Fruitland Coal.

Date: 12/20/06

Drilling Engineer:

E. J. Giles