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-078882
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**
Canyon Largo Unit

3. **Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499

(505) 326-9700

8. **Farm or Lease Name**
Canyon Largo Unit

9. **Well Number**
451

4. **Location of Well**
1795' FNL, 1980' FWL

Latitude 36° 24.1, Longitude 107° 30.6

10. **Field, Pool, Wildcat**
Basin Dakota

11. **Sec., Twn, Rge, Mer. (NMPM)**
F Sec. 18, T-25-N, R-6-W

API # 30-039- 26646

14. **Distance in Miles from Nearest Town**
35 miles from Blanco

12. **County** Rio Arriba

13. **State** NM

15. **Distance from Proposed Location to Nearest Property or Lease Line**
1795'

16. **Acres in Lease**

17. **Acres Assigned to Well**
320.52 W/2

18. **Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease**
3200'

19. **Proposed Depth**
7380'

20. **Rotary or Cable Tools**
Rotary

21. **Elevations (DF, FT, GR, Etc.)**
6775' GR

22. **Approx. Date Work will Start**

23. **Proposed Casing and Cementing Program**
See Operations Plan attached

ARE SUBJECT TO ITEMS STIPULATED AND ATTACHED
"GENERAL REQUIREMENTS"

24. **Authorized by:** Peggy Cole
Regulatory/Compliance Supervisor

11-30-00
Date

PERMIT NO.

APPROVAL DATE 8/15/01

APPROVED BY David J. Mankiewicz **TITLE** AFM minerals **DATE** 8/15/01

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.

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	[2] Pool Code	[3] Pool Name
30-039-26646	71599	Basin Dakota

[4] Property Code	[5] Property Name	[6] Well Number
6886	CANYON LARGO UNIT	451

[7] OGRID No.	[8] Operator Name	[9] Elevation
14538	BURLINGTON RESOURCES OIL & GAS, INC.	6775'

[10] Surface Location

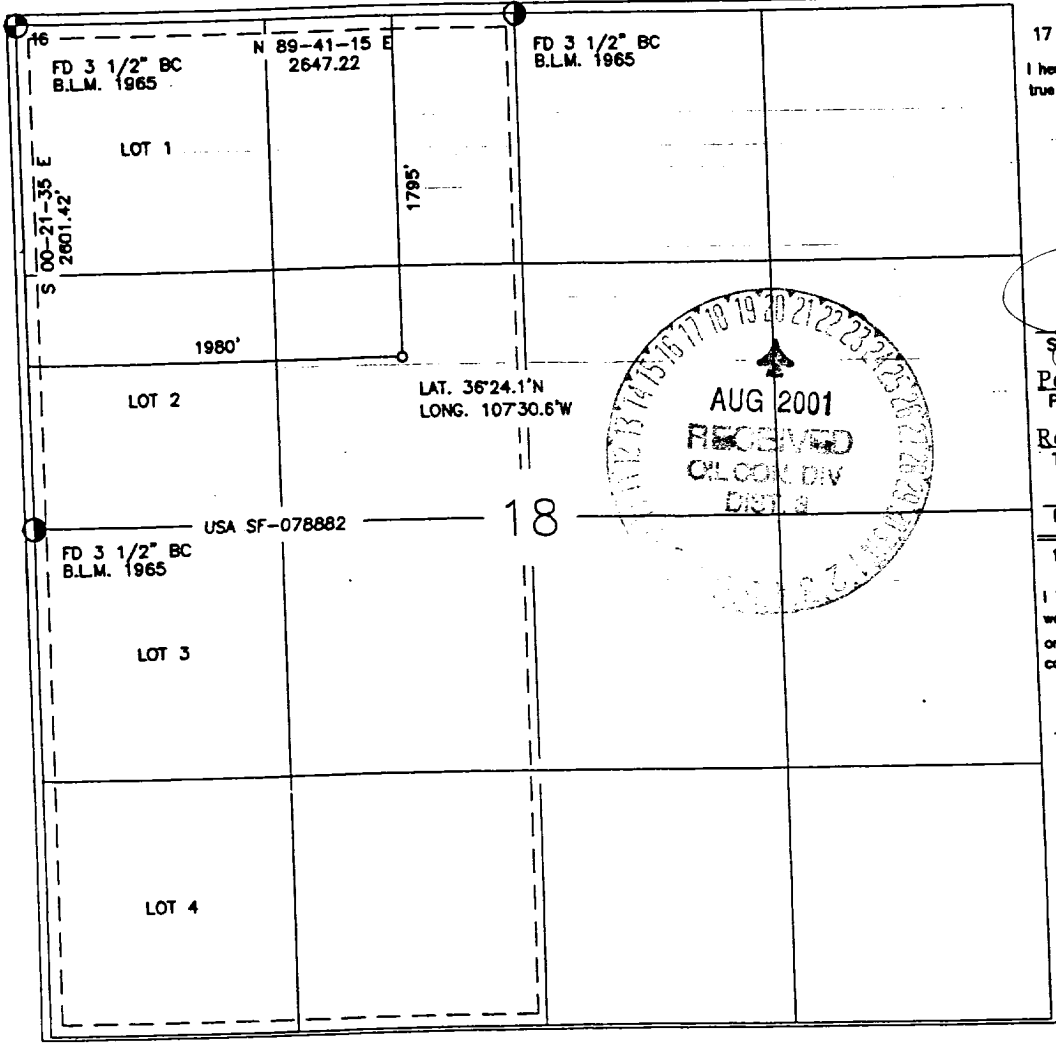
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	18	25-N	6-W		1795'	NORTH	1980'	WEST	RIO ARRIBA

[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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
W/320.52			

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

Signature: Peggy Cole

Peggy Cole
Printed Name

Regulatory Supervisor
Title

11-30-00
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.

10-1ROY A. RUSH
Date of Survey

Signature and Seal of Professional Surveyor:
NEW MEXICO 8894 REGISTERED PROFESSIONAL LAND SURVEYOR

8894
Certificate Number

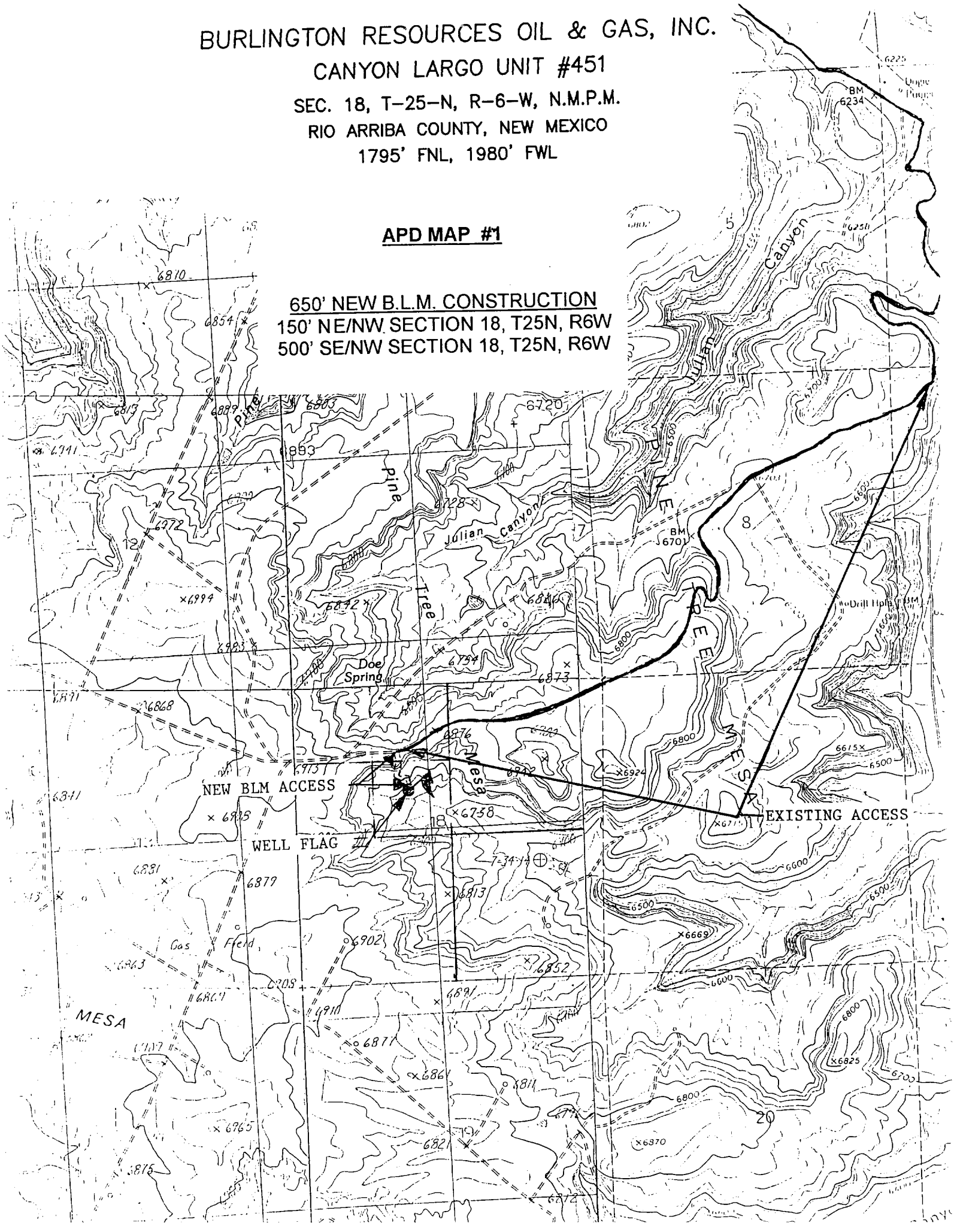
BURLINGTON RESOURCES OIL & GAS, INC.

CANYON LARGO UNIT #451

SEC. 18, T-25-N, R-6-W, N.M.P.M.
RIO ARRIBA COUNTY, NEW MEXICO
1795' FNL, 1980' FWL

APD MAP #1

650' NEW B.L.M. CONSTRUCTION
150' NE/NW SECTION 18, T25N, R6W
500' SE/NW SECTION 18, T25N, R6W



OPERATIONS PLAN

Well Name: Canyon Largo Unit #451
Location: 1795'FNL, 1980'FWL, Sec 18, T-25-N, R-6-W
Rio Arriba County, NM
Latitude 36° 24.1, Longitude 107° 30.6
Formation: Basin Dakota
Elevation: 6775' GL

Formation Tops:	***Top***	***Bottom***	***Contents***
Surface	San Jose	2025'	
Ojo Alamo	2025'	2225'	aquifer
Kirtland	2225'	2425'	gas
Fruitland	2425'	2690'	gas
Pictured Cliffs	2690'	2825'	gas
Lewis	2825'	3085'	gas
Mesa Verde	3085'	3546'	gas
Chacra	3546'	4250'	gas
Massive Cliff House	4250'	4320'	gas
Menefee	4320'	4943'	gas
Massive Point Lookout	4943'	5180'	gas
Mancos	5180'	6533'	gas
Gallup	6533'	6915'	gas
Greenhorn	6915'	6967'	gas
Graneros	6967'	7008'	gas
Dakota	7008'		gas
TD	**7380'**		

Logging Program:
Open hole - Array Induction, Neutron-Density - TD to intermediate Casing, DIL-GR TD to surface
Cased hole - CBL-CCL-GR - TD to surface
Cores - none

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 320'	Spud	8.4-8.9	40-50	no control
320- 7450'	LSND	8.4-9.0	40-60	8-12

Pit levels will be visually monitored to detect gain or loss of fluid control.

Casing Program:

Hole Size	Depth Interval	Csg.Size	Wt.	Grade
12 1/4"	0' - 320'	8 5/8"	24.0#	WC-50
7 7/8"	0' - 7380'	4 1/2"	11.6#	N-80

Tubing Program:

0' - 7380'	2 3/8"	4.7#	J-55

BOP Specifications, Wellhead and Tests:

Surface to TD -
11" 3000 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.

2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -
6" 3000 psi double gate BOP stack (Reference Figure #2).
After nipple-up prior to completion, pipe rams and casing top will be tested to 3000 psi for 15 minutes.

Surface to Total Depth -
2" nominal, 3000 psi minimum choke manifold (Reference Figure #3).

Wellhead -
8 5/8" x 4 1/2" x 1 1/2" x 1 1/2" 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.
- A BOP pit level drill will be conducted weekly for each drilling crew.
- All of the BOP tests and drills will be recorded in the daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

8 5/8" surface casing -
Cement to surface w/336 sx Class "G" cement w/3% calcium chloride and 1/4#/sx cellophane flakes (396 cu.ft. of slurry, 200% excess to circulate to surface.) WOC 8 hr prior to drilling out surface casing. 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.

Production Casing - 4 1/2"
Two-stage cement job as follows:
First Stage: Cement to circulate to stage tool @ 4150'. Lead with 766 sx class ""G" 50/50 poz w/5% gel, 0.25 pps Celloflake, 5 pps Gilsonite, 0.25 pps Fluid loss, 0.15% dispersant, 0.1% retarder. WOC 4 hours prior to pumping second stage. (Slurry volume: 1103 cu.ft. Excess slurry 50%.)

Second Stage: Cement to circulate to surface. Cement with 563 sx Litecrete, 0.11% dispersant. WOC a minimum of 18 hours prior to cleanout. (Slurry volume: 1418 cu.ft. Excess slurry: 50%.)

Float shoe on bottom. Three centralizers run every other joint above shoe. Thirty-five centralizers - one every 4th joint to the base of the Ojo Alamo @ 2225'. Two turbolizing type centralizers - one below and one into the base of the Ojo Alamo @ 2225'. Standard centralizers thereafter every fourth joint up to the base of the surface pipe.

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

Additional Information:

The Dakota formations will be completed.
- No abnormal temperatures or hazards are anticipated.
- 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 west half of Section 18 is dedicated to this well.
- This gas is dedicated.
- Anticipated pore pressure

Fruitland Coal	300 psi
Pictured Cliffs	500 psi
Mesa Verde	700 psi
Dakota	3000 psi

John P. Hosford
Drilling Engineer

12/12/00
Date