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-078580
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
Howell C

9. Well Number
#3B

4. Location of Well
1560'FNL, 1105'FEL

Latitude 36° 49.7, Longitude 107° 42.7

10. Field, Pool, Wildcat
Blanco PC/Blanco MV

11. Sec., Twn, Rge, Mer. (NMPM)
H Sec.7, T-30-N, R-8-W

API # 30-045-30325

14. Distance in Miles from Nearest Town
8 miles from Navajo Dam Post Office

12. County
San Juan

13. State
NM

15. Distance from Proposed Location to Nearest Property or Lease Line
1105'

16. Acres in Lease

17. Acres Assigned to Well
PC: NE/160
MV: E/320

18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease
1200'

19. Proposed Depth
5677'

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

20. Rotary or Cable Tools
Rotary

21. Elevations (DF, FT, GR, Etc.)
6282'GL

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: Peggy Cole
Regulatory/Compliance Supervisor

8-1-00
Date

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY /s/ Jim Lovato TITLE _____ DATE DEC - 4

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.

NMOCD

RECEIVED
2000 DEC -5 PM 1:19
070 FARMINGTON NM

DEC 2000
RECEIVED
OIL CON. DIV
DIST. 3

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	[2] Pool Code	[3] Pool Name
30-045- 30325	72359/72319	Blanco Pictured Cliffs/Blanco Mesaverde

[4] Property Code	[5] Property Name	[6] Well Number
7120	HOWELL C	3B

[7] OGRID No.	[8] Operator Name	[9] Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY	6282'

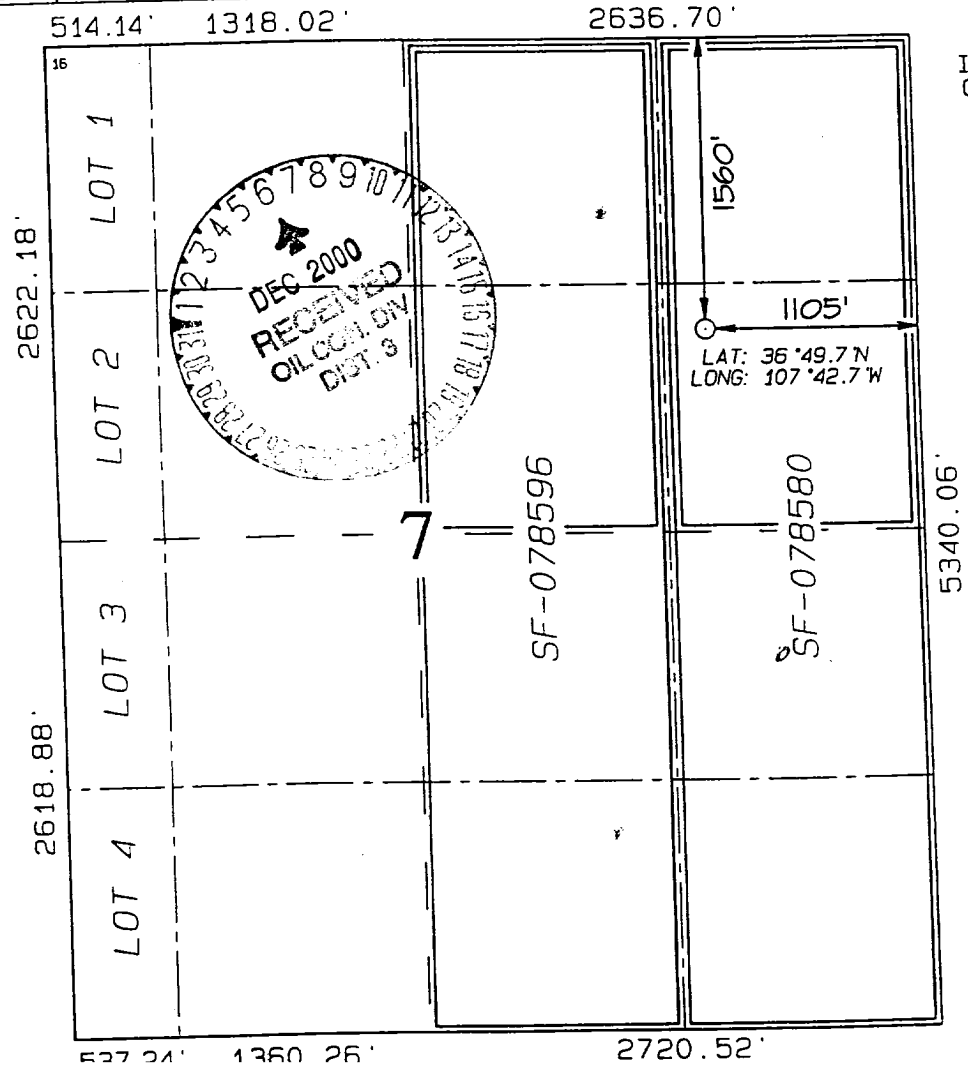
[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	7	30N	8W		1560	NORTH	1105	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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
PC: NE/160 MV: E/320			



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
Printed Name

Regulatory Supervisor
Title

8-1-00
Date

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this pl was plotted from field notes of actual surveys made by m or under my supervision, and that the same is true and correct to the best of my belief.

JUNE 1, 2000
Date of Survey

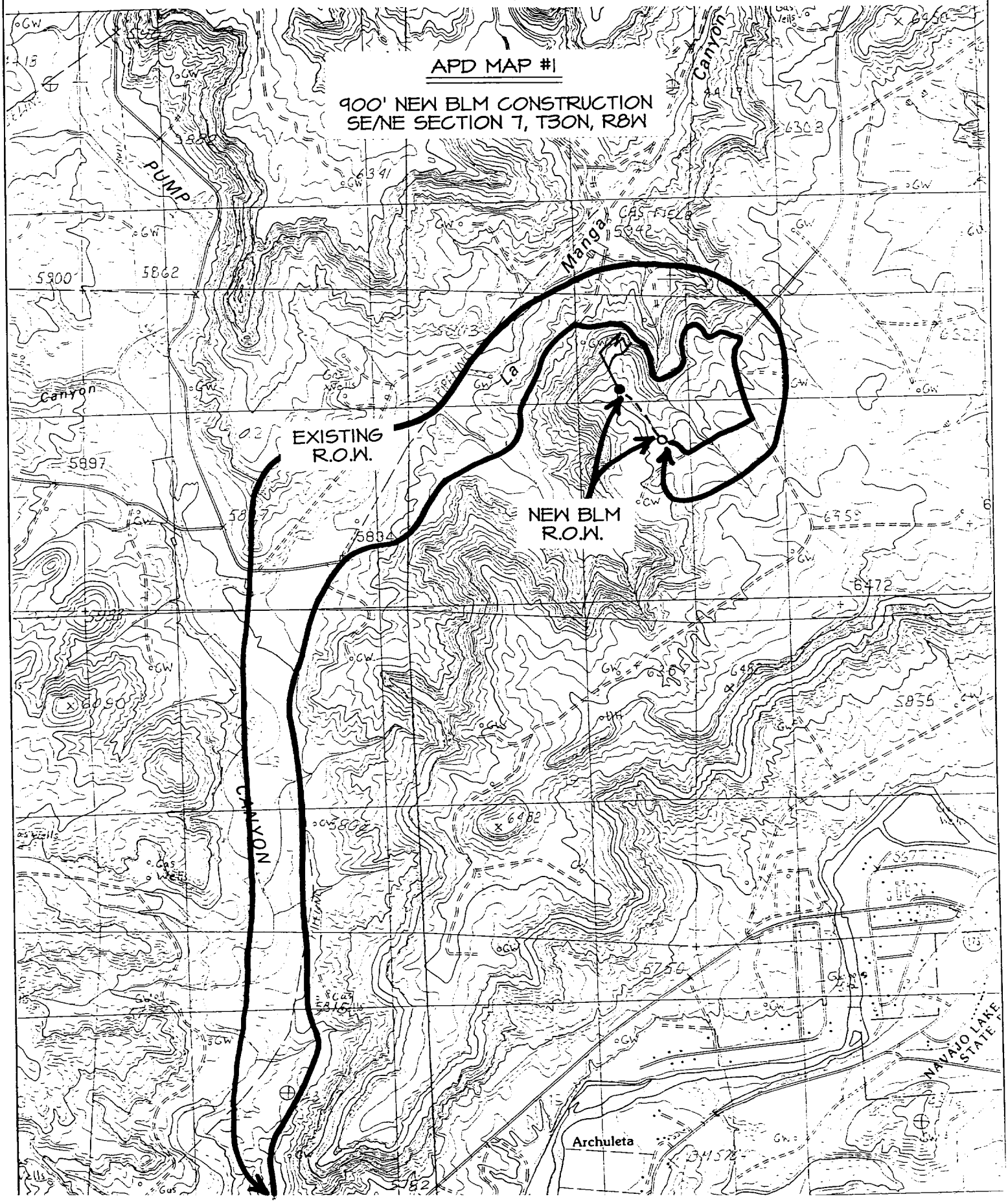
Signature and Seal of Professional Surveyor

NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED PROFESSIONAL SURVEYOR

Certificate Number 6857

BURLINGTON RESOURCES OIL & GAS COMPANY HOWELL C #3B

1560' FNL & 1105' FEL, SECTION 7, T30N, R8W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO



OPERATIONS PLAN

Well Name: Howell C #3B
Surface Location: 1560'FNL, 1105'FEL, Section 7, T-30-N, R-8-W
San Juan County, New Mexico
Latitude 36° 49.7, Longitude 107° 42.7

Formation: Blanco Pictured Cliffs/Blanco Mesaverde
Elevation: 6282' GL

Formation Tops:	***Top***	***Bottom***	***Contents***
Surface	San Jose	1844'	aquifer
Ojo Alamo	1844'	2000'	aquifer
Kirtland	2000'	2484'	gas
Fruitland	2484'	3074'	gas
Pictured Cliffs	3074'	3174'	gas
Lewis	3174'	3780'	gas
Intermediate TD	**3274'**		
Mesa Verde	3780'	4114'	gas
Chacra	4114'	4814'	gas
Massive Cliff House	4814'	4929'	gas
Menefee	4929'	5277'	gas
Point Lookout	5277'	5677'	gas
Total Depth	**5677'**		

Logging Program:
Cased hole logging - Gamma Ray, Cement bond from surface to TD
Open hole logging - Array Induction, Neutron-Density - intermediate TD
Mud Logs/Coring/DST - none

Mud Program:

Interval- MD	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud	8.4-9.0	40-50	no control
200- 3274'	LSND	8.4-9.0	30-60	no control
3274- 5677'	Air/Mist	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):

Hole Size	Measured Depth	Csg Size	Weight	Grade
12 1/4"	0' - 200'	9 5/8"	32.3#	H-40
8 3/4"	0' - 3274'	7"	20.0#	J-55
6 1/4"	3174' - 5677'	4 1/2"	10.5#	J-55

Tubing Program: 0' -5677' 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.

BOP Specifications, Wellhead and Tests (cont'd):

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 2000 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 drill crew.
- All BOP tests & 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/343 sx Class "B" w/3% sodium metasilicate, 5# gilsonite/sx and 0.5# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% gel, 2% calcium chloride, 5# gilsonite/sx and 0.25# flocele/sx (994 cu.ft. of slurry, 125% 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 to determine TOC. Test casing to 1500 psi for 30 minutes.

7" intermediate casing alternative two stage: Stage collar at 2384'. First stage: cement with 212 sx Class "B" 50/50 poz cmt with 2% gel, 2% calcium chloride, 5 pps gilsonite, 0.25 pps flocele. Second stage: 246 sx Class "B" with 3% sodium metasilicate, 0.5 pps Flocele, 5 pps Gilsonite (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 2000'. Two turbolating centralizers at the base of the Ojo Alamo at 2000'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Liner -
Cement to circulate liner top. Pump 256 sx 50/50 Class "B" Poz w/1/4# flocele/sx, 2% gel, 0.1% retardant, 5# gilsonite/sx and 0.4% fluid loss additive (360 cu.ft., 40% excess to circulate liner top). WOC a minimum of 18 hrs prior to completing.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. The liner hanger will have a rubber packoff.

- 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 (Air/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.
- 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 Pictured Cliffs/Mesaverde formations will be completed and dualled.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	800 psi
Pictured Cliffs	800 psi
Mesa Verde	700 psi

- 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 northeast quarter of Section 7 is dedicated to the Pictured Cliffs and the east half of Section 7 is dedicated to the Mesa Verde.
- This gas is dedicated.

Leslie C. White
Drilling Engineer

8/2/00
Date