

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-078135 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 Huerfanito Unit
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Huerfanito Unit 9. Well Number 90A
4. Location of Well 1360' FSL, 2265' FEL Latitude 36° 30.8, Longitude 107° 44.4	10. Field, Pool, Wildcat Blanco Mesaverde 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 1, T-26-N, R-9-W API # 30-045-30309
14. Distance in Miles from Nearest Town 15 mi from Huerfano Trading Post	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1360'	17. Acres Assigned to Well 320.06 E/2
16. Acres in Lease	
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 150'	
19. Proposed Depth 4600'	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6163' 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: <u><i>Regina Cole</i></u> Regulatory/Compliance Administrator	<u>6-20-00</u> Date

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY /s/ Jim Lovato TITLE _____ DATE OCT 31 2000

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

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 30-045 30309		2 Pool Code 72319		3 Pool Name Blanco Mesaverde		
4 Property Code 7138		5 Property Name HUERFANITO UNIT			6 Well Number 90A	
7 OGRID No. 14538		8 Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			9 Elevation 6163'	

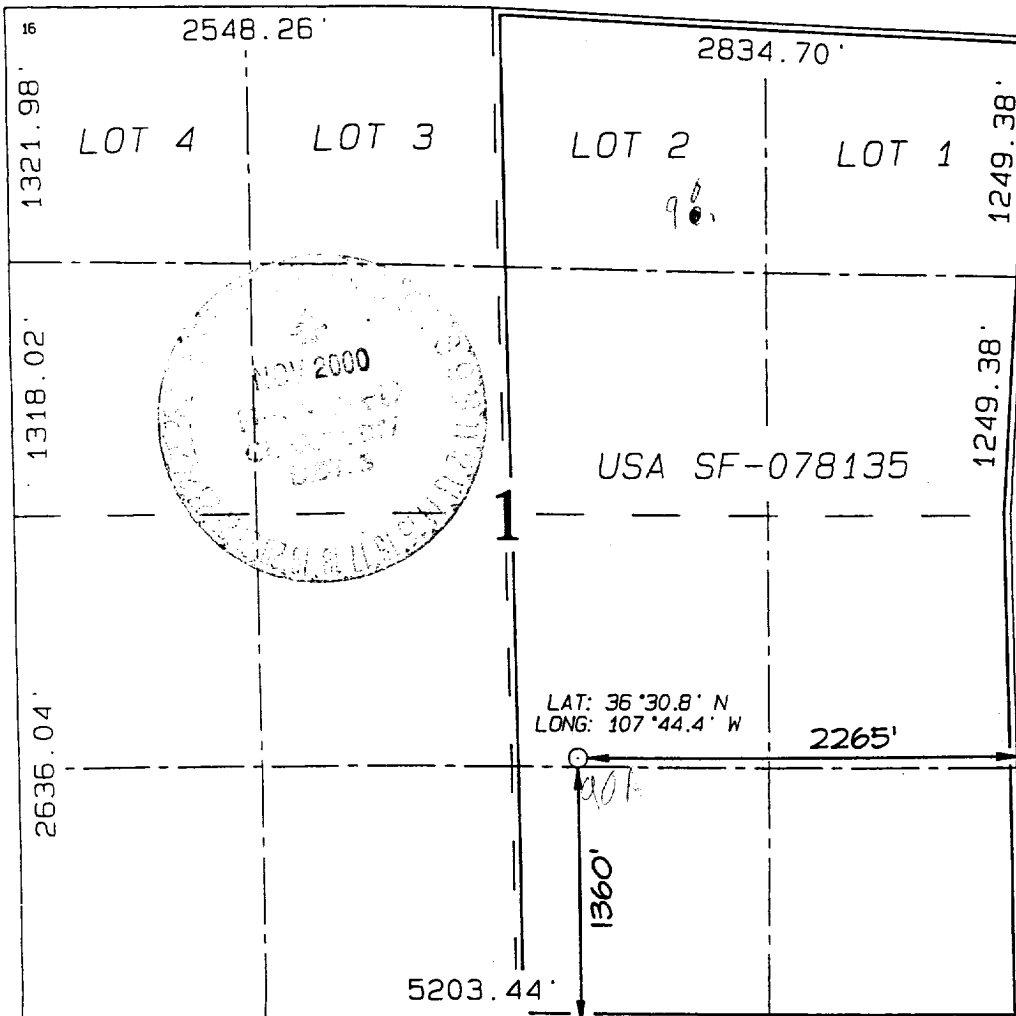
10 Surface Location

U. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	1	26N	9W		1360	SOUTH	2265	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface

U. 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/320.06		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



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
6-20-00
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.

MARCH 29, 2000
Date of Survey
Neale C. Edwards
Signature and Seal
NEALE C. EDWARDS
NEW MEXICO
6857
Certificate Number
6857

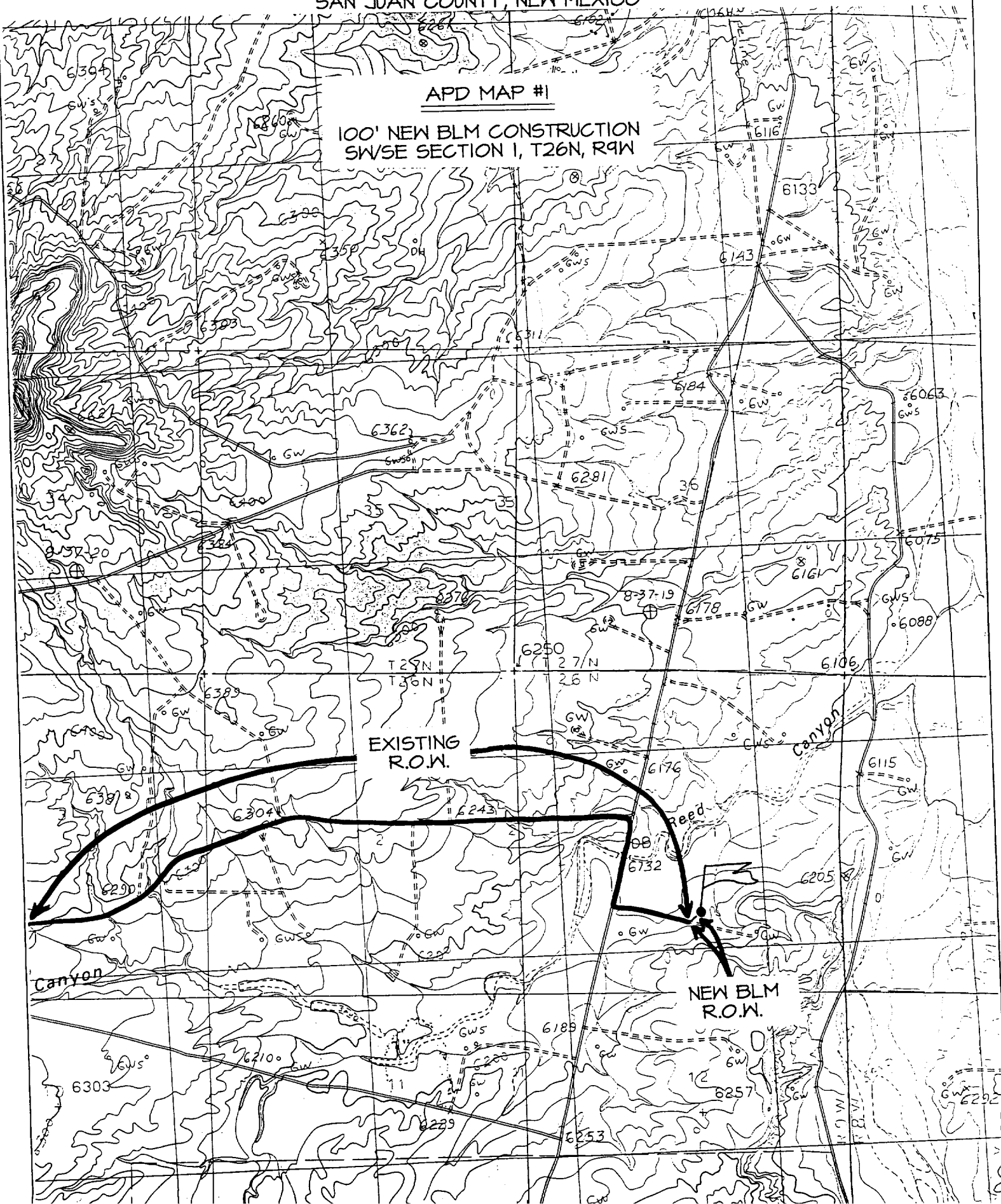
BURLINGTON RESOURCES OIL & GAS COMPANY HUERFANITO UNIT #90A

1360' FSL & 2265' FEL, SECTION 1, T26N, R9W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

APD MAP #1

100' NEW BLM CONSTRUCTION
SWSE SECTION 1, T26N, R9W



OPERATIONS PLAN

Well Name: Huerfanito Unit #90A
Surface Location: 1360' FSL, 2265' FEL, Section 1, T-26-N, R-9-W
San Juan County, New Mexico
Latitude 36° 30.8, Longitude 107° 44.4

Formation: Blanco Mesa Verde
Elevation: 6163' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1097'	aquifer
Ojo Alamo	1097'	1220'	aquifer
Kirtland	1220'	1667'	gas
Fruitland	1667'	1907'	gas
Pictured Cliffs	1907'	2017'	gas
Lewis	2017'	2372'	gas
Intermediate TD	2117'		
Mesa Verde	2372'	2802'	gas
Chacra	2802'	3462'	gas
Massive Cliff House	3462'	3552'	gas
Menefee	3552'	4262'	gas
Point Lookout	4262'	4549'	gas
Mancos	4549'	4600'	
Total Depth	4600'		

Logging Program:
Cased hole logging - Gamma Ray, Cement bond from surface to TD
Mud Logs/Coring/DST - none

<u>Interval- MD</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 80'	Spud	8.4-9.0	40-50	no control
80- 2117'	LSND	8.4-9.0	30-60	no control
2117- 4600'	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):

<u>Hole Size</u>	<u>Measured Depth</u>	<u>Csq Size</u>	<u>Weight</u>	<u>Grade</u>
12 1/4"	0' - 80'	9 5/8"	32.3#	H-40
8 3/4"	0' - 2117'	7"	20.0#	J-55
6 1/4"	2017' - 4600' ✓	4 1/2"	10.5#	J-55

Tubing Program: 0' -4600' 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 64 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (75 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/177 sx Class "B" w/3% sodium metasilicate, 7# gilsonite/sx and 0.5# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% gel, 2% calcium chloride, 7# gilsonite/sx and 0.5# flocele/sx (637 cu.ft. of slurry, 60% 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 1567'. First stage: cement with 57 sx Class "B" cmt with 7 pps gilsonite, 1/2 pps cellophane, 3% sodium metasilicate. Second stage: 354 sx Class "B" with 3% sodium metasilicate, 1/2 pps Cellophane, 7 pps Gilsonite (637 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 1220'. Two turbolating centralizers at the base of the Ojo Alamo at 1220'. 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 (371 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):

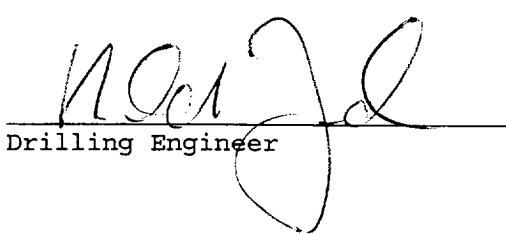
The following equipment will be operational while gas/mist drilling:

- 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 Mesa Verde formation will be completed.
- 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 east half of Section 1 is dedicated to the Mesa Verde.
- This gas is dedicated.


Drilling Engineer


Date