

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 NMSF078200A 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 Grambling C 9. Well Number 1B	
4. Location of Well 800' FNL, 670' FEL Latitude 36° 49.0, Longitude 107° 50.8	10. Field, Pool, Wildcat Blanco Mesaverde/Basin Dakota 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 14, T-30-N, R-10-W API # 30-045-31909	
14. Distance in Miles from Nearest Town 11 miles to int. Hwy 550 & Hwy 173 in Aztec, NM	12. County San Juan	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 670'	17. Acres Assigned to Well MV-E/313.36 DK-N/311.78	
16. Acres in Lease	18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 1880'	
19. Proposed Depth 7910'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6544' GR	22. Approx. Date Work will Start This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.	
23. Proposed Casing and Cementing Program See Operations Plan attached	24. Authorized by: <u>Deputy Call</u> Regulatory/Compliance Supervisor Date <u>11-9-01</u>	

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

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.

was originally named Grambling C #2B

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102

Revised February 21, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

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

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045 30909	² Pool Code 72319/71599	³ Pool Name Blanco Mesa Verde/Basin Dakota
⁴ Property Code 7056	⁵ Property Name GRAMBLING C	⁶ Well Number 281B
⁷ OGRID No. D14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS INC.	⁹ Elevation 6544

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
A	14	30-N	10-W		800	NORTH	670	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 MV-E/313.36 DK-N/311.78				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

¹⁶ FD 3 1/4" BLM 1967 BRASS CAP				S 88°04'03" W 5231.94'(M)				LOT 1 800' 837' 523'				¹⁷ FD 3 1/4" BLM 1967 BRASS CAP 670' S 00°49'15" E 2646.78'(M)				OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief <u>Peggy Cole</u> Signature Peggy Cole Printed Name Regulatory Supervisor Title Date <u>11-9-01</u>			
LOT 4				LOT 3				LOT 2 LAT: 36°49.0' N. LONG: 107°50.8' W.				LOT 8				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. <u>8-15-01</u> Date of Survey <u>BOY A. RUSH</u> Signature and Seal of Professional Surveyor 8894 Certificate Number			
LOT 5				LOT 6				LOT 7 USA SF-078200-A				LOT 8							
LOT 12				LOT 11				LOT 10				LOT 9 FD 3 1/4" BLM 1967 BRASS CAP							
LOT 13				LOT 14				LOT 15				LOT 16							

BURLINGTON RESOURCES OIL & GAS INC.

GRAMBLING C NO. 2B 1B

NE/4 SEC. 14, T-30-N, R-10-W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

800' FNL 670' FEL

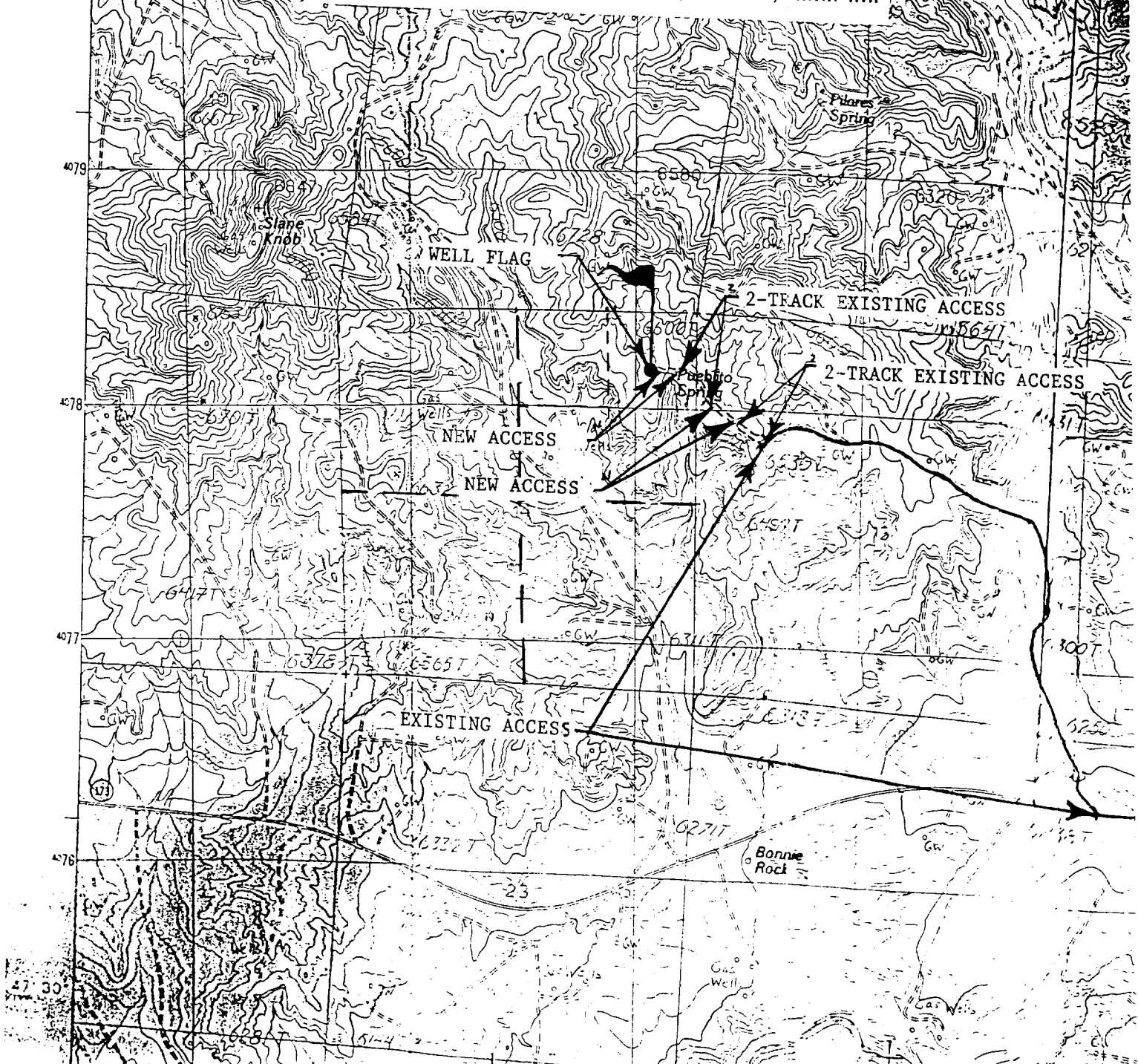
APD MAP #1

2250' NEW BLM CONSTRUCTION

600' NE/4 NE/4, SEC. 14, T-30-N, R-10-W, N.M.P.M.

500' NW/4 NW/4, SEC. 13, T-30-N, R-10-W, N.M.P.M.

1150' SW/4 NW/4, SEC. 13, T-30-N, R-10-W, N.M.P.M.



OPERATIONS PLAN

Well Name: Grambling C #1B
Location: 800' FNL, 670' FEL, Sec 14, T-30-N, R-10-W
San Juan County, NM
Latitude 36° 49.0, Longitude 107° 50.8
Formation: Blanco Mesaverde/Basin Dakota
Elevation: 6544' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1906'	
Ojo Alamo	1906'	2031'	aquifer
Kirtland	2031'	2670'	gas
Fruitland	2670'	3200'	gas
Pictured Cliffs	3200'	3350'	gas
Lewis	3350'	3935'	gas
Intermediate TD	3450'		
Mesa Verde	3935'	4247'	gas
Chacra	4247'	4849'	gas
Massive Cliff House	4849'	5029'	gas
Menefee	5029'	5457'	gas
Massive Point Lookout	5457'	5798'	gas
Mancos	5798'	6726'	gas
Gallup	6726'	7453'	gas
Greenhorn	7453'	7506'	gas
Graneros	7506'	7555'	gas
Dakota	7555'		gas
TD	7910'		

Logging Program:

Cased hole - CBL-CCL-GR - TD to surface
Open hole - Platform express: GR/AIT, Rhob/Neutron - TD to 3850'
Mudlog - 7353' to TD
Cores - none

Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 450'	Spud	8.4-9.0	40-50	no control
450- 3450'	LSND	8.4-9.0	30-60	no control
3450- 7540'	Air/N2	n/a	n/a	n/a
7540- 7910'	LSND	8.4-9.0	30-60	no control

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>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 450'	9 5/8"	32.3#	H-40
8 3/4"	0' - 3450'	7"	20.0#	J-55
6 1/4"	3350' - 7910'	4 1/2"	10.5#	J-55

Tubing Program:

0' - 7910' 2 3/8" 4.7# J-55

BOP Specifications, Wellhead and Tests:

Surface to Intermediate 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.

Intermediate TD to Total Depth -

11" 3000 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, 3000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -

7 1/16" 3000 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 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.
- BOP pit level drill will be conducted weekly for each drilling crew.
- All BOP tests and 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 358 sx Class "B" cement with 1/4# celloflake/sx and 3% calcium chloride (423 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/357 sx 50/50 Class G/TXI lightweight w/2.5% sodium metasilicate, 2% calcium chloride, 10# gilsonite/sx and 1/2# celloflake/sx. Tail w/90 sx 50/50 Class "G" Poz w/2% calcium chloride, 2% gel, 1/4 pps celloflake, 5 pps gilsonite, 0.1% antifoam agent (1037 cu.ft. of slurry, 100% 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 during completion operations to determine TOC. Test casing to 1500 psi for 30 minutes.

See attached alternative intermediate lead slurry.

7" intermediate casing alternative two stage: Stage collar at 2570'. First stage: cement with 207 sx 50/50 Class "G" Poz w/2% calcium chloride, 2% gel, 1/4 pps celloflake, 5 pps gilsonite, 0.1% antifoam agent. Second stage: 299 sx 50/50 Class G/TXI lightweight w/2.5% sodium metasilicate, 2% calcium chloride, 10# gilsonite/sx and 1/2# celloflake/sx (1037 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 2031'. Two turbolating centralizers at the base of the Ojo Alamo at 2031'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Casing -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 455 sx 50/50 Class "G" Poz with 5% gel, 0.25# celloflake/sx, 5# gilsonite/sx, 0.1% retardant and 0.25% fluid loss additive, 0.15% dispersant, 0.1% antifoam agent (655 cu.ft.), 40% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

4 1/2" production casing alternative: Lead w/180 sx 9.5 PPG Litecrete Blend w/0.11% dispersant, 0.5% fluid loss. Tail w/172 sx Class G 50/50 poz w/5% gel, 0.25 pps celloflake, 5 pps gilsonite, 0.25% fluid loss, 0.15% dispersant, 0.1% retarder, 0.1% antifoam (701 cu.ft., 50% excess to cement 4 1/2" x 7" overlap).

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

Cement float shoe on bottom with float collar spaced on top of float shoe.

Note: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. In its place, a long string of 4 1/2" casing will be run and cemented with a minimum of 100' of cement overlap between the 4 1/2" x 7" casing strings. After completion of the well, a 4 1/2" retrievable bridge plug will be set below the top of cement in the 4 1/2" x 7" overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4 1/2" x 7" overlap and laid down. The 4 1/2" bridge plug will then be retrieved and the production tubing will be run to produce the well.

- 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 (Gas/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.
- Deduster equipment will be utilized.
- 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.