

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator: BP AMERICA PRODUCTION COMPANY
Contact: MARY CORLEY
E-Mail: corleym@bp.com

3a. Address
P.O. BOX 3092
HOUSTON, TX 77253

3b. Phone No. (include area code)
Ph: 281.366.4491
Fx: 281.366.0700

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface Lot 2 750FNL 1490FEL 36.47200 N Lat, 107.41700 W Lon
At proposed prod. zone Lot 2 660FNL 1980FEL 36.47200 N Lat, 107.41700 W Lon

14. Distance in miles and direction from nearest town or post office*
21 MILES FROM BLOOMFIELD, NEW MEXICO

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
750

16. No. of Acres in Lease
287.18

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth
5708 MD
5638 TVD

21. Elevations (Show whether DF, KB, RT, GL, etc.)
6236 GL

22. Approximate date work will start
04/15/2002

5. Lease Serial No.
NMSF - 079511-A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.
NMNM- 73315

8. Lease Name and Well No.
FLORANCE 46B

9. API Well No.
30-045-31027

10. Field and Pool, or Exploratory
BLANCO MESAVERDE

11. Sec., T., R., M., or Blk. and Survey or Area
B Sec 29 T30N R8W Mer NMP

12. County or Parish
SAN JUAN

13. State
NM

17. Spacing Unit dedicated to this well
287.18 E/2

20. BLM/BIA Bond No. on file

23. Estimated duration
6 DAYS

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED

24. Attachments

This action is subject to technical and
procedural review pursuant to 43 CFR 3105.8

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be submitted to the BLM for review and approval pursuant to 43 CFR 3105.4.

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature
(Electronic Submission)

Name (Printed/Typed)
MARY CORLEY

Date
03/18/2002

Title
AUTHORIZED REPRESENTATIVE

Approved by (Signature)
/s/ David J. Markiewicz

Name (Printed/Typed)

Date
4/1/02

Title
AFM

Office
FFO

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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 representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #10802 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington

** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL **
HOLD C104 FOR Directional survey NMOC

District I
PO Box 1980, Hobbs NM 88241-1980
District II
PO Drawer KK, Artesia, NM 87211-0719
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 30-045-31027		2 Pool Code 72319		3 Pool Name Blanco Mesaverde		
4 Property Code 000518		5 Property Name FLORANCE			6 Well Number # 46B	
7 OGRID No. 000778		8 Operator Name BP AMERICA PRODUCTION COMPANY			9 Elevation 6236	

10 Surface Location

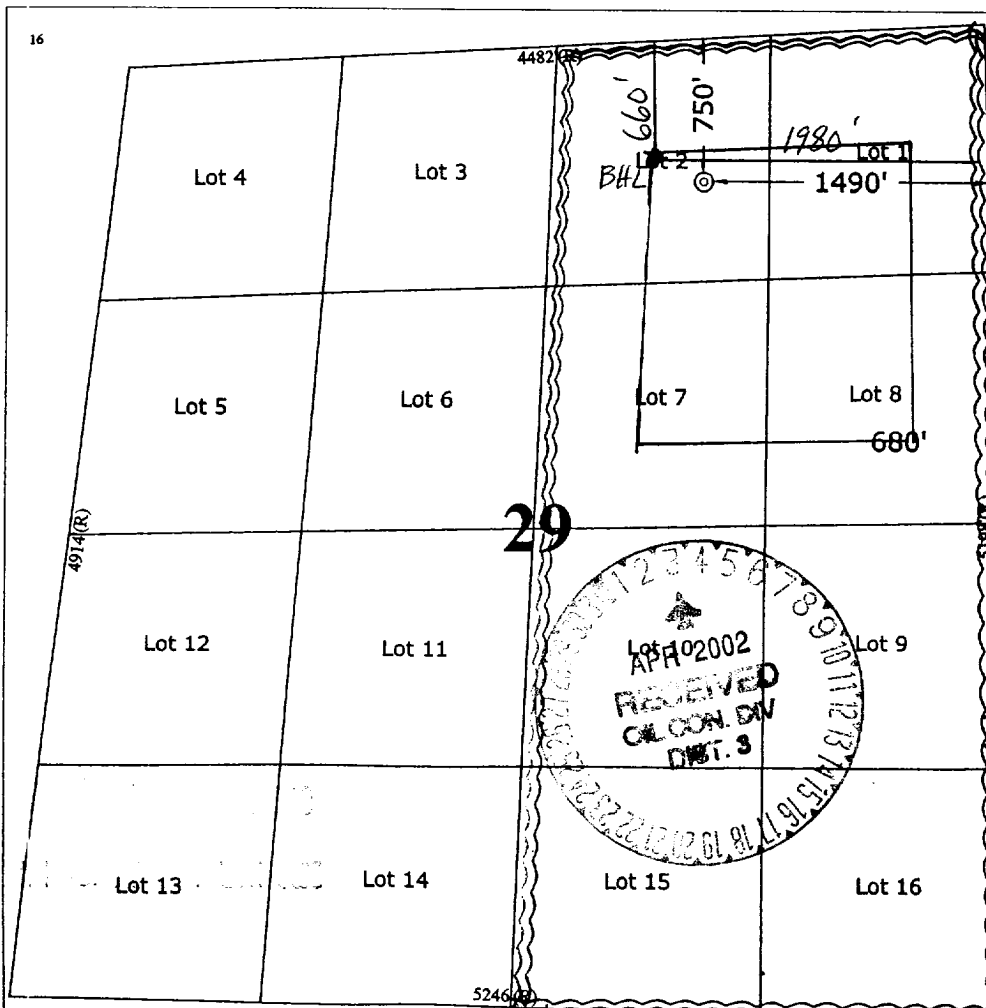
UL or Lot No. B (Lot 2)	Section 29	Township 30 N	Range 8 W	Lot Idn	Feet from the 750	North/South line NORTH	Feet from the 1490	East/West line EAST	County SAN JUAN
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11 Bottom Hole Location If Different From Surface

7 UL or lot no. Lot 2	Section 29	Township 30 N	Range 8 W	Lot Idn	Feet from the 660	North/South line NORTH	Feet from the 1980	East/West line EAST	County SAN JUAN
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12 Dedicated Acres 287.10	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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: *Mary Cooley*
Printed Name: **MARY COOLEY**
Title: **Sr. Regulatory Analyst**
Date: **03.18.02**

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.

July 9, 2001

Date of Survey
Signature and Seal of Professional Surveyor

7016
Certificate Number

PRODUCTION COMPANY

T30N, R8W, N.M.P.M.

along existing pipeline

Lot 2 - 600'

APD MAP # 1

**AMOCO PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM**

Prospect Name: Florance
Lease: Florance
County: San Juan
State: New Mexico
Date: March 18, 2002

Well No: 46B
Surface Location: 29-30N-8W, 750 FNL, 1490 FEL
Field: Blanco Mesaverde
Bottom Location: 29-30N-8W, 660 FNL, 1980 FEL

OBJECTIVE: Drill 50' below the base of the Mancos Shale, set 41/2" production liner, Stimulate LS, CH, MF and PL intervals

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Estimated GL: 6236		Estimated KB: 6250	
Rotary	0 - TD				
LOG PROGRAM		MARKER	TVD	MEAS. DEPTH	
TYPE	DEPTH INVERAL	Ojo Alamo	1804	1867	
<u>OPEN HOLE</u>		Kirkland	1999	2067	
None		Fruitland Coal	2606	2676	
		Pictured Cliffs	2981	3051	
		Lewis Shale	3138	3208	
		Cliff House	4704	4774	
		Menefee Shale	4826	4896	
<u>CASED HOLE</u>		Point Lookout	5202	5272	
GR-CCL-TDT	TDT - TD to 7" shoe	Mancos	5588	5658	
CBL	Identify 4 1/2" cement top				
REMARKS:		#			
- Please report any flares (magnitude & duration).		#			
		*			
		*			
		TOTAL DEPTH	5638	5708	
		# Probable completion interval		* Possible Pay	
SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE		FREQUENCY	DEPTH	FREQUENCY	DEPTH
None		none	Production hole	Geograph	0-TD
REMARKS:					

MUD PROGRAM:					
Approx. Interval	Type Mud	Weight, #/ga	Vis, sec/qt	W/L cc's/30 min	Other Specification
0 - 120	Spud	8.6-9.2			
120 - 2626 (1)	Water/LSND	8.6-9.2		<6	
2626 - 5708	Gas/Air/N2/Mist	Volume sufficient to maintain a stable and clean wellbore			

REMARKS:
 (1) The hole will require sweeps to keep unloaded while fresh water drilling. Let hole conditions dictate frequency.

CASING PROGRAM: (Normally, tubular goods allocation letter specifies casing sizes to be used. Hole sizes will be governed by Contract)						
Casing String	Estimated Depth	Casing Size	Grade	Weight	Hole Size	Landing Pt, Cmt, Etc.
Surface/Conductor	120	9 5/8"	H-40 ST&C	32#	12.25"	1
Intermediate	2626	7"	J/K-55 ST&C	20#	8.75"	1,2
Production Liner	5708	4 1/2"	J-55	10.5#	6.25"	3, 4

REMARKS:
 (1) Circulate Cement to Surface
 (2) Set casing 50' above Fruitland Coal
 (3) Bring cement 100' above 7" shoe
 (4) 100' Overlap

CORING PROGRAM:
 None

COMPLETION PROGRAM:
 Rigless, 3-4 Stage Limited Entry Hydraulic Frac

GENERAL REMARKS:
 Notify BLM/NMOCD 24 hours prior to Spud, BOP testing, and Casing and Cementing.

Form 46 Reviewed by: _____ Logging program reviewed by: N/A

PREPARED BY:	APPROVED:	DATE:
HGJ/MNP		11 th March 2002
Form 46 12-00 MNP		Version 1.0

FEDERAL CEMENTING REQUIREMENTS

1. All permeable zones containing fresh water and other usable water containing 10,000 PPM or less total dissolved solids will be isolated and protected from contamination by cement circulated in place for the protection of permeable zones per the NTL-FRA 90-1 Section III A.
2. The hole size will be no smaller than 1 ½" larger diameter than the casing O.D. across all water zones.
3. An adequate spacer will be pumped ahead of the cement slurry to help prevent mud contamination of the cement.
4. An adequate number of casing centralizers will be run through usable water zones to ensure that the casing is centralized through these zones. The adequate number of centralizers to use will be determined by API SPEC 10D.
5. Centralizers will impart a swirling action around the casing and will be used just below and into the base of the lowest usable water zone.
6. A chronological log will be kept recording the pump and slurry information and will be sent to the BLM with the subsequent sundry.

SAN JUAN BASIN Mesaverde Formation Pressure Control Equipment

Background

The objective Mesaverde formation maximum surface pressure is anticipated to be less than 1000 PSI, based on shut-in surface pressures from adjacent wells. Pressure control equipment working pressure minimum requirements are therefore 2000 PSI. Equipment to be used will conform to API RP-53 (Figure 2.C.2) for a 2000 PSI system per Federal Onshore Order No. 2. Due to available conventional equipment within the area, 3000 PSI rated pressure control equipment will typically be utilized in a double ram type arrangement. Regional drilling rights to be utilized have substructure height limitations which exclude the use of annular preventers; therefore a rotating head will be installed above these rams. This pressure control equipment will be utilized for conventional drilling below conductor to total depth. No abnormal temperature, pressure, or Hydrogen Sulfide gas is anticipated.

Equipment Specification

Interval

BOP Equipment

Below conductor casing to total depth

11" nominal or 7 1/16", 3000 PSI double ram
preventer with rotating head.

All ram type preventers and related control equipment will be hydraulically tested to 250 PSI (low pressure) and 750 PSI (high pressure), upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP equipment will include Kelly cock, upper Kelly cock with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure at the appropriate intervals

Cementing Program

Well Name: Florance 46B
 Location: 29-30N-8W, 750 FNL, 1490 FEL
 County: San Juan
 State: New Mexico

Field: Blanco Mesaverde / Basin Dakota
 API No.
 Well Flac
 Formation: MesaVerde
 KB Elev (est) 6250
 GL Elev. (est) 6236

Casing Program:

Casing String	Est. Depth (ft.)	Hole Size (in.)	Casing Size (in.)	Thread	TOC (ft.)	Stage Tool Or TOL (ft.)	Cmt Cir. Out (bbl.)
Surface	120	12.25	9.625	ST&C	Surface	NA	
Intermediate	2626	8.75	7	LT&C	Surface	NA	
Production -	5708	6.25	4.5		2526	NA	

Casing Properties:

(No Safety Factor Included)

Casing String	Size (in.)	Weight (lb/ft)	Grade	Burst (psi.)	Collapse (psi.)	Joint St. (1000 lbs.)	Capacity (bbl/ft.)	Drift (in.)
Surface	9.625	32	H-40	3370	1400	254	0.0787	8.845
Intermediate	7	20	K-55	3740	2270	234	0.0405	6.456
Production -	4.5	11.6	J-55	5350	4960	154	0.0155	3.875

Mud Program

Apx. Interval (ft.)	Mud Type	Mud Weight	Recommended Mud Properties Prio Cementing:
			PV <20 YP <10 Fluid Los: <15
0 - SCP	Water/Spud	8.6-9.2	
SCP - ICP	Water/LSND	8.6-9.2	
ICP - ICP2	Gas/Air Mist	NA	
ICP2 - TD	LSND	8.6 - 9.2	

Cementing Program:

	Surface	Intermediate	Production
Excess %, Lead	100	100	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	72	110	159
Time Between Stages, (hr)	NA	NA	NA
Special Instructions	1,6	1,6	2,6

1. Do not wash pumps and lines.
2. Wash pumps and lines.
3. Reverse out
4. Run Blend Test on Cement
5. Record Rate, Pressure, and Density on 3.5" disk
6. Confirm densitometer with pressurized mud scales
7. 1" cement to surface if cement is not circulated.
8. If cement is not circulated to surface, run temp. survey 10-12 hr. after landing plug.

Notes:

*Do not wash up on top of plug. Wash lines before displacing production cement job to minimize drillout.

Surface:

Preflush	20 bbl.	FreshWater	
Slurry 1	70 sx Class G Cement		75 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		0.3132 cuft/ft OH
	0.1% D46 antifoam		100 % excess
Slurry Properties:	Density (lb/gal)	Yield (ft ³ /sk)	Water (gal/sk)
Slurry 1	15.8	1.16	4.95

Casing Equipment:
 9-5/8", 8R, ST&C
 1 Guide Shoe
 1 Top Wooden Plug
 1 Autofill insert float valve
 Centralizers, 1 per joint except top joint

Cementing Program

1 Stop Ring
1 Thread Lock Compound

Intermediate:

Fresh Water	20 bbl	fresh water	
Lead Slurry 1 TOC@Surface	240 sx Class "G" Cement + 3% D79 extender + 1/4 #/sk. Cellophane Flake + 0.1% D46 antifoam'		624 cuft
Tail Slurry 2	60 sx 50/50 Class "G"/Poz + 2% gel (extender) 0.1% D46 antifoam		75 cuft
500 ft fill	+ 1/4 #/sk. Cellophane Flake + 2% S1 Calcium Chloride		0.1503 cuft/ft OH 0.1746 cuft/ft csg ann 80 % excess

Slurry Properties:	Density (lb/gal)	Yield (ft ³ /sk)	Water (gal/sk)
Slurry 1	11.7	2.61	17.77
Slurry 2	13.5	1.27	5.72

Casing Equipment: 7", 8R, ST&C

1 Float Shoe
1 Float Collar
1 Stop Ring
Centralizers, one every other joint to base of Ojo
2 Turbolizers across Ojo
Centralizers, one every 4th joint from Ojo to base of surface casing
1 Top Rubber Plug
1 Thread Lock Compound

Production:

Fresh Water	10 bbl	CW100	
Slurry	190 LiteCrete D961 / D124 / D154 + 0.03 gps D47 antifoam + 0.5% D112 fluid loss + 0.11% D65 TIC		459 cuft
TOC@Liner Top			0.1026 cuft/ft OH 40 % excess 0.1169 cuft/ft csg ann
Slurry Properties:	Density (lb/gal)	Yield (ft ³ /sk)	Water (gal/sk)
Slurry	9.5	2.52	6.38

Casing Equipment: 4-1/2", 8R, ST&C

1 Float Shoe (autofill with minimal LCM in mud)
1 Float Collar (autofill with minimal LCM in mud)
1 Stop Ring
Centralizers, every 4th joint in mud drilled holes, none in air drilled holes
1 Top Rubber Plug
1 Thread Lock Compound