

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: corleyml@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

5. Lease Serial No.
SF - 078049

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
HUGHES A 3N

9. API Well No.
3004531352

10. Field and Pool, or Exploratory
BASIN DAKOTA/BLANCO MESAVERDE

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface SESE Lot P 540FSL 940FEL 36.41500 N Lat, 107.40600 W Lon
At proposed prod. zone

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 28 T29N R8W Mer NMP

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

12. County or Parish
SAN JUAN

13. State
NM

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
540

16. No. of Acres in Lease
320.00

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

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
1000

19. Proposed Depth
7355 MD

20. BLM/BIA Bond No. on file
WY2924

21. Elevations (Show whether DF, KB, RT, GL, etc.)
6313 GL

22. Approximate date work will start
03/01/2003

23. Estimated duration
7 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

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
01/21/2003

Title
AUTHORIZED REPRESENTATIVE

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

Name (Printed/Typed)

Date
MAR 14 2003

Title

Office

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 #17837 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington

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

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

HOLD C104 FOR NSL

** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL **

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

API Number 30-045-31352		Pool Code 71599 & 72319		Pool Name BASIN DAKOTA & BLANCO MESAVERDE	
Property Code 000 701		Property Name Hughes A			Well Number # 3/1
OGRID No. 000 778		Operator Name BP AMERICA PRODUCTION COMPANY			Elevation 6313

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
P	28	29 N	8 W		540	SOUTH	940	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 320		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

	<p>¹⁶</p>	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Mary Corley</i> Signature</p> <p><i>Mary Corley</i> Printed Name</p> <p><i>SE Regulatory Analyst</i> Title</p> <p><i>01-20-2003</i> Date</p>
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>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.</p> <p>December 11, 2002 Date of Survey</p> <p><i>GARY B. BLANN</i> Signature and Seal of Professional Surveyor</p> <p></p> <p>7016 Certificate Number</p>	

**BP AMERICA PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM**

Prospect Name: Hughes A
Lease: Hughes A
County: San Juan
State: New Mexico
Date: December 17, 2002

Well No: 3N
Surface Location: 28-29N-8W, 540 FSL, 1940 FEL
Field: Blanco Mesaverde/Basin Dakota

OBJECTIVE: Drill 50' below the top of the Lower Cubero (DKOT Mbr.), set 4 1/2" production casing, Stimulate CH, MF, PL and DKOT intervals

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Estimated GL: 6313'		Estimated KB: 6327'	
Rotary	0 - TD	MARKER		SUBSEA	TVD
LOG PROGRAM		Ojo Alamo		4492'	1834'
TYPE	DEPTH INTERVAL	Kirtland		4351'	1976'
<u>OPEN HOLE</u>		Fruitland		3942'	2387'
None		Fruitland Coal	*	3673'	2654'
		Pictured Cliffs	*	3480'	2847'
		Lewis	#	3284'	3043'
<u>CASED HOLE</u>		Cliff House	#	1975'	4351'
GR-CCL-TDT	TDT - TD to 7" shoe	Menefee	#	1722'	4605'
CBL	Identify 4 1/2" cement top	Point Lookout	#	1255'	5074'
REMARKS:		Mancos		831'	5496'
- Please report any flares (magnitude & duration).		Greenhorn		-697'	7024'
		Graneros		-757'	7084'
		DKOT/Two Wells	#	-808'	7136'
		Paguate	#	-902'	7229'
		U. Cubero	#	-942'	7269'
		L. Cubero	#	-978'	7305'
		TOTAL DEPTH		-1028	7355'
SPECIAL TESTS		# Probable completion interval		* Possible Pay	
Type: none		DRILL CUTTING SAMPLES		DRILLING TIME	
Remarks		Frequency	Depth	Frequency	Depth
		None	Production hole	Geograph	0-TD

MUD PROGRAM:						
Approx. Interval		Type Mud	Weight, #/gal	Vis, sec/qt	W/L cc's/30 min	Other Specification
0	- 200	Spud	8.6-9.2			
200	- 3143	Water/LSND	8.6-9.2		<6	
3143	- 7355	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	200	9 5/8"	H-40 ST&C	32#	13.5"	1
Intermediate 1	3143	7"	J/K-55 ST&C	20#	8.75"	1,2
Production	7355	4 1/2"	J-55	11.6#	6.25"	3,4

REMARKS:
(1) Circulate Cement to Surface
(2) Set casing 100' into Lewis Shale
(3) Bring cement 100' above 7" shoe

CORING PROGRAM:
None

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

GENERAL REMARKS:
Notify BLM/NMOCDD 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/JMP		December 17, 2002	
Form 46 12-00 MNP		Version 1.0	

BP America Production Company

BOP Pressure Testing Requirements

Well Name: Hughes A
County: San Juan

3N
State: New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1835'		
Fruitland Coal	2654'		
PC	2847'		
Lewis Shale	3043'		
Cliff House	4351'	500	0
Menefee Shale	4605'		
Point Lookout	5072'	600	0
Mancos	5496'		
Dakota	7135'	2600	1400

** Note: Determined using the following formula: $ABHP - (.22 \times TVD) = ASP$

Requested BOP Pressure Test Exception: 1500 psi

SAN JUAN BASIN
Dakota Formation
Pressure Control Equipment

Background

The objective Dakota 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 in the Basin Dakota. No abnormal temperature, pressure, or H2S anticipated.

Equipment Specification

Interval

Below conductor casing to total depth

BOP Equipment

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 2000 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.

Cementing Program

Well Name: Hughes A3N Location: 28-29N-8W, 540 FSL, 1940 FEL County: San Juan State: New Mexico	Field: Blanco Mesaverde / Basin Dakota API No. Well Flac Formation: Dakota MesaVerde KB Elev (est) 6327 GL Elev. (est) 6313
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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	200	12.25	9.625	ST&C	Surface	NA	
Intermediate	3143	8.75	7	LT&C	Surface	NA	
Production -	7355	6.25	4.5	?	3043	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
Intermediate		7	20 K-55	3740		2270	234	0.0405
Production -		4.5	11.6 J-55	5350		4960	154	0.0155

Mud Program

Apx. Interval (ft.)	Mud Type	Mud Weight	Recommended Mud Properties Prio Cementing:
			PV <20
			YP <10
			Fluid Loss <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	75	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	75	120	183
Special Instructions	1,6,7	1,6,8	2,4,6

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	110 sx Class G Cement	125 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)	
	0.25 #/sk Cellophane Flake (lost circulation additive)	0.3132 cuft/ft OH
	0.1% D46 antifoam	
Slurry Properties:	Density (lb/gal)	Yield (ft ³ /sk)
	Water (gal/sk)	
Slurry 1	15.8	1.16
		4.95

Cementing Program

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
 1 Stop Ring
 1 Thread Lock Compound

Intermediate:

Fresh Water	20 bbl	fresh water	
Lead		260 sx Class "G" Cement	677 cuft
Slurry 1		+ 3% D79 extender	
TOC@Surface		+ 2% S1 Calcium Chloride	
		+1/4 #/sk. Cellophane Flake	
		+ 0.1% D46 antifoam'	
Tail		60 sx 50/50 Class "G"/Poz	75 cuft
Slurry 2		+ 2% gel (extender)	
500 ft fill		0.1% D46 antifoam	0.1503 cuft/ft OH
		+1/4 #/sk. Cellophane Flake	0.1746 cuft/ft csg ann
		+ 2% CaCl2 (accelerator)	

Slurry Properties:	Density	Yield	Water
	(lb/gal)	(ft3/sk)	(gal/sk)
Slurry 1	11.4	2.61	17.77
Slurry 2	13.5	1.27	5.72

Casing Equipment: 7", 8R, ST&C
 1 Float Shoe (autofill with minimal LCM in mud)
 1 Float Collar (autofill with minimal LCM in mud)
 1 Stop Ring
 14 Centralizers (one in middle of first joint, then every third collar)
 2 Fluidmaster vane centralizers @ base of Ojo
 1 Top Rubber Plug
 1 Thread Lock Compound

Production:

Fresh Water	10 bbl	CW100	
Lead		170 LiteCrete D961 / D124 / D154	410 cuft
Slurry 1		+ 0.03 gps D47 antifoam	
TOC, 100' above 7" shoe		+ 0.5% D112 fluid loss	
		+ 0.11% D65 TIC	
Tail		140 sx 50/50 Class "G"/Poz	195 cuft
Slurry 2		+ 5% D20 gel (extender)	+ 5 #/sk D24 gilsonite
1359 ft fill		+ 0.1% D46 antifoam	+ 0.15% D65 TIC
		+ 1/4 #/sk. Cellophane Flake	+ 0.1% D800 retarder
		+ 0.25% D167 Fluid Loss	
			0.1026 cuft/ft OH

Cementing Program

Slurry Properties:	Density (lb/gal)	Yield (ft ³ /sk)	Water (gal/sk)	0.1169 cuft/ft csg ann
Slurry 1	9.5	2.52	6.38	
Slurry 2	13	1.44	6.5	Top of Mancos 5496

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