

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: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF - 078578A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator BP AMERICA PRODUCTION COMPANY		7. If Unit or CA Agreement, Name and No.
Contact: MARY CORLEY E-Mail: corleyml@bp.com		8. Lease Name and Well No. HOWELL 1B
3a. Address P.O. BOX 3092 HOUSTON, TX 77253	3b. Phone No. (include area code) Ph: 281.366.4491 Fx: 281.366.0700	9. API Well No. 30 045 31312
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SESW Lot N 950FSL 1755FWL 36.47500 N Lat, 107.41900 W Lon At proposed prod. zone		10. Field and Pool, or Exploratory BLANCO MESAVERDE
14. Distance in miles and direction from nearest town or post office* 19 MILES FROM BLOOMFIELD, NEW MEXICO		11. Sec., T., R., M., or Blk. and Survey or Area Sec 20 T30N R8W Mer NMP N
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 950	16. No. of Acres in Lease 1207.40	12. County or Parish SAN JUAN
17. Spacing Unit dedicated to this well 267.50 S/2	18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 5147 MD	13. State NM
19. Proposed Depth 5147 MD	20. BLM/BIA Bond No. on file WY2924	
21. Elevations (Show whether DF, KB, RT, GL, etc.) 5762 GL	22. Approximate date work will start 02/05/2003	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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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). | 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 01/14/2003
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature) /s/ Jim Lovato	Name (Printed/Typed)	Date FEB - 5 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 #17629 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".

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

NMOCD

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 30-045-31312		2 Pool Code 72319		3 Pool Name BLANCO MESAVARDE	
4 Property Code 000688		5 Property Name Howell			6 Well Number # 1B
7 OGRID No. 000778		8 Operator Name BP AMERICA PRODUCTION COMPANY			9 Elevation 5762

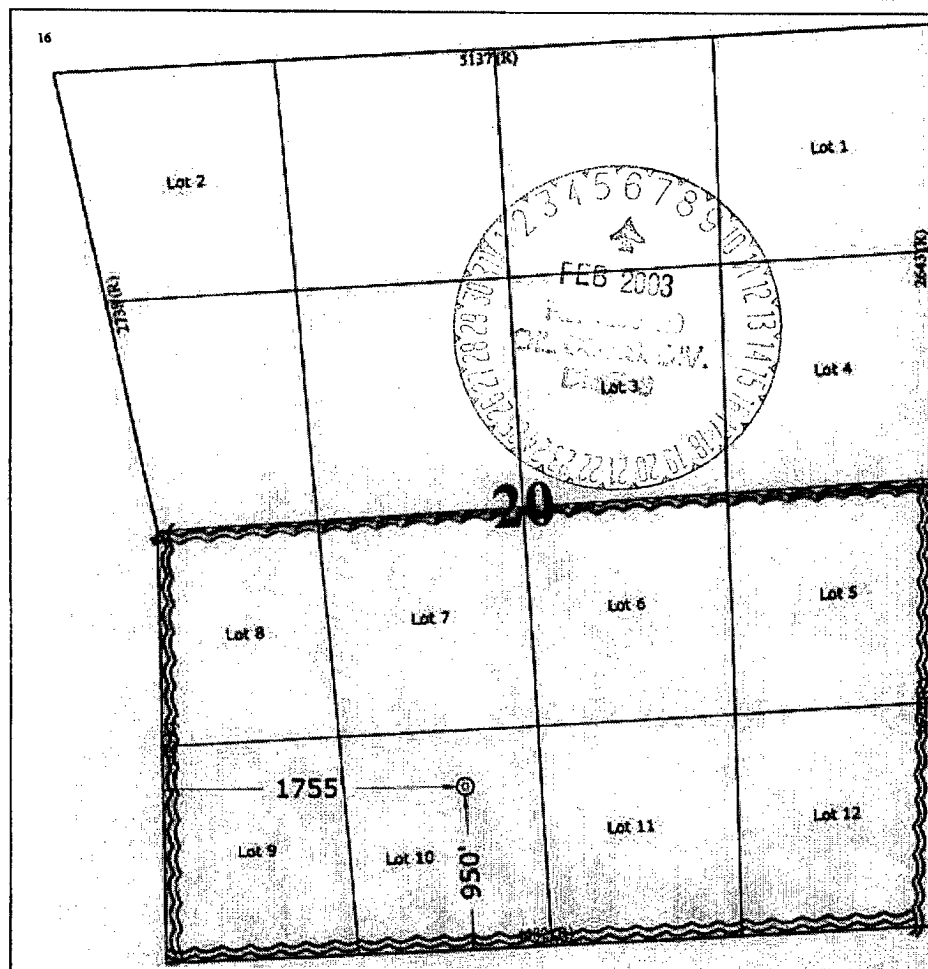
10 Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N (Lot 10)	20	30 N	8 W		950	SOUTH	1755	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

7 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 267.5		13 Joint or Infill							

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.

Mary Corley
Signature
MARY CORLEY
Printed Name
SR. REGULATORY ANALYST
Title
12.18.2002
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.

December 4, 2002
Date of Survey
Signature and Seal of Professional Surveyor

GARY D. VANN
NEW MEXICO
REGISTERED PROFESSIONAL SURVEYOR
7016
Certificate Number
7016

Cementing Program

Well Name: Howell 1B Location: 22-30N-8W, 950 FSL, 1755 FWL County: San Juan State: New Mexico	Field: Blanco Mesaverde API No. Well Flac Formation: MesaVerde KB Elev (est) 5775 GL Elev. (est) 5762
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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	120	12.25	9.625	ST&C	Surface	NA	
Intermediate	2130	8.75	7	LT&C	Surface	NA	
Production -	5147	6.25	4.5		2030	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 Lost <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 (ft3/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		190 sx Class "G" Cement	475 cuft
Slurry 1		+ 3% D79 extender	
TOC@Surface		+1/4 #/sk. Cellophane Flake	
		+ 0.1% D46 antifoam	
Tail		60 sx 50/50 Class "G"/Poz	
Slurry 2		+ 2% gel (extender)	75 cuft
		0.1% D46 antifoam	
500 ft fill		+1/4 #/sk. Cellophane Flake	0.1503 cuft/ft OH
		+ 2% S1 Calcium Chloride	0.1746 cuft/ft csg ann
			80 % excess

Slurry Properties:	Density	Yield	Water
	(lb/gal)	(ft3/sk)	(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
 Centalizers, 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		180 LiteCrete D961 / D124 / D154	
		+ 0.03 gps D47 antifoam	450 cuft
		+ 0.5% D112 fluid loss	
TOC@Liner Top		+ 0.11% D65 TIC	
			0.1026 cuft/ft OH
			40 % excess
Slurry Properties:	Density	Yield	Water
	(lb/gal)	(ft3/sk)	(gal/sk)
Slurry	9.5	2.52	6.38
			0.1169 cuft/ft csg ann

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

Prospect Name: Howell
Lease: Howell
County: San Juan
State: New Mexico
Date: December 10, 2002

Well No: 1 B
Surface Location: 20-30N-8W, 950' FSL, 1755' FWL
Field: Blanco Mesaverde

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

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Estimated GL: 5762'		Estimated KB: 5775'	
Rotary	0 - TD				
LOG PROGRAM		MARKER		SUBSEA	TVD
TYPE	DEPTH INVERAL	Ojo Alamo		4416'	1346'
<u>OPEN HOLE</u>		Kirtland		4246'	1516'
None		Fruitland		3828'	1947'
		Fruitland Coal	*	3582'	2180'
		Pictured Cliffs	*	3291'	2484'
		Lewis	#	3187'	2588'
		Cliff House	#	1789'	3986'
<u>CASED HOLE</u>		Menefee	#	1454'	4321'
GR-CCL-TDT	TDT - TD to 7" shoe	Point Lookout	#	1093'	4682'
CBL	Identify 4 1/2" cement top	Mancos		665'	5097'
		TD		657'	5118'
REMARKS:		TOTAL DEPTH			
- Please report any flares (magnitude & duration).		615'			
		5147'			
		# Probable completion interval		* Possible Pay	
SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE		FREQUENCY	DEPTH	FREQUENCY	DEPTH
None		None	Production hole	Geolograph	0-TD
REMARKS:					

MUD PROGRAM:								
Approx. Interval				Type Mud	Weight, #/gal	Vis, sec/qt	W/L cc's/30 min	Other Specification
0	-	120	(1)	Spud	8.6-9.2			
120	-	2130		Water/LSND	8.6-9.2		<6	
2130	-	5147		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#	13.5"	1
Intermediate 1	2130	7"	J/K-55 ST&C	20#	8.75"	1,2
Production	5147	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, 2-3 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:

December 10, 2002

Version 1.0

HGJ/MNP

Form 46 12-00 MNP

BP America Production Company

BOP Pressure Testing Requirements

Well Name: Howell
County: San Juan

1B
State: New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1346'		
Fruitland Coal	2180'		
PC	2484'		
Lewis Shale	2588'		
Cliff House	3986'	500	0
Menefee Shale	4321'		
Point Lookout	4682'	600	0
Mancos	5097'		

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

Requested BOP Pressure Test Exception: 750 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.