

RECEIVED

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
APPLICATION OF PERMIT TO DRILL OR REENTER

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

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>SF - 080597</b>
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well Gas <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or tribe Name
2. Name of Operator <b>BP America Production Company Attn: Mary Corley</b>		7. If Unit or CA Agreement, Name and No
3a. Address <b>P.O. Box 3092 Houston, Texas 77253</b>	3b. Phone No. (include area code) <b>281-366-4491</b>	8. Lease Name and Well No. <b>Gartner LS 9M</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface <b>790 1446 FEL</b> At proposed prod. Zone		9. API Well No. <b>3004531843</b>
10. Field and Pool, or Exploratory <b>Basin Dakota &amp; Blanco Mesaverde</b>		11. Sec., T., R., M., or Blk, and survey or Area <b>0 Sec. 33, T30N, R08W</b>
14. Distance in miles and direction from nearest town or post office* <b>20 miles from Bloomfield, NM</b>		12. County or Parish <b>San Juan</b>
15. Distance from proposed* Location to nearest Property or lease line, ft. (Also to nearest drig. Ujnit line, if any) <b>820'</b>		13. State <b>New Mexico</b>
16. No. of Acres in lease <b>320</b>		17. Spacing Unit dedicated to this well <b>320 E/2</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>1000'</b>		20. BLM/BIA Bond No. on file <b>WY2924</b>
21. Elevations (show whether DF, KDB., RT, GL, etc.) <b>6400 GL 6383</b>		22. Approximate date work will start* <b>September 20, 2003</b>
		23. Estimated duration <b>7 Days</b>

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 <i>Mary Corley</i>	Name (Printed/typed) <b>Mary Corley</b>	Date <b>08/13/2003</b>
Title <b>Senior Regulatory Analyst</b>		
Approved By <b>David J. Markiewicz</b>	Name (Printed/Typed)	Date <b>DEC - 1 2003</b>
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.

\*(Instructions on reverse)

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

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

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

<sup>1</sup> API Number 30.045-31843		<sup>2</sup> Pool Code 71599-72319		<sup>3</sup> Pool Name BASIN DAKOTA - BLANCO MESAVARDE	
<sup>4</sup> Property Code 000591		<sup>5</sup> Property Name GARTNER LS			<sup>6</sup> Well Number # 9M
<sup>7</sup> OGRID No. 000778		<sup>8</sup> Operator Name BP AMERICA PRODUCTION COMPANY			<sup>9</sup> Elevation 6383

<sup>10</sup> Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	33	30 N	8 W		790	SOUTH	1445	EAST	SAN JUAN

Bottom Hole Location If Different From Surface

<sup>7</sup> UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 320		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> 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

<div><p>16</p><p>790'</p><p>1445'</p><p>38</p><p>5139</p><p>5236</p></div>	<p><b>17 OPERATOR CERTIFICATION</b></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 MARY CORLEY Printed Name Sr Regulatory Analyst Title 10.10.2003 Date</p>
	<p><b>18 SURVEYOR CERTIFICATION</b></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>September 11, 2003 Date of Survey</p> <p>Signature and Seal of Professional Surveyor  7016 Certificate Number</p>

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB NO. 1004-0135  
Expires: November 30, 2000**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.**5. Lease Serial No.  
NMSF080597

6. If Indian, Allottee or Tribe Name

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

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other8. Well Name and No.  
GARTNER LS 9M

2. Name of Operator

BP AMERICA PRODUCTION CO

Contact: MARY CORLEY

E-Mail: corleym1@bp.com

9. API Well No.

3004531843

3a. Address

P. O. BOX 3092  
HOUSTON, TX 77253

3b. Phone No. (include area code)

Ph: 281.366.4491  
Fx: 281.366.070010. Field and Pool, or Exploratory  
BASIN DAKOTA  
BLANCO MESAVERDE

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 33 T30N R8W SWSE 790FSL 1445FEL

11. County or Parish, and State

SAN JUAN COUNTY, NM

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

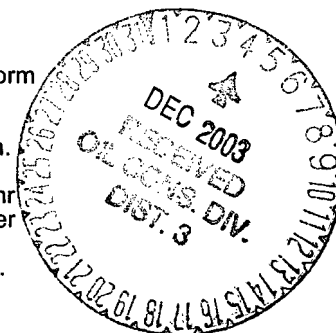
13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Please note the following admendments to our Application for Permit to Drill the subject well.  
Original APD was submitted on August 13, 2003 - Permit still Pending.

Change Drilling location from 820' FSL & 1820' FEL to: 790' FSL & 1445' FEL as per attached Form C-102. Amended notice of staking submitted on 10-02-2003.

Also attached are amended Drilling and Completion Program and Proposed Cementing Program.

BP is currently using 3% CaCl2 in our slurry and achieves 300 psi compressive strength after 1 hr 50 min and 500 psi after 3 hrs 8 min. Therefore, we request approval to initiate blowout preventer (BOP) nipple up operations after a 2 hour wait on cement time in lieu of the 6 hour time frame required by rule to achieve 300 psi compressive strength with Class B cement slurry at 80 deg F.



14. I hereby certify that the foregoing is true and correct.

Electronic Submission #24163 verified by the BLM Well Information System

For BP AMERICA PRODUCTION CO, sent to the Farmington

Committed to AFMSS for processing by ADRIENNE GARCIA on 10/22/2003 (04AXG1605SE)

Name (Printed/Typed) MARY CORLEY

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 10/14/2003

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

/s/ David J. Mankiewicz

Approved By

Title

DEC - 1 2003  
Date

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

Office

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.

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

NMOC

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

**Prospect Name:** Gartner LS  
**Lease:** Gartner  
**County:** San Juan  
**State:** New Mexico  
**Date:** July 18, 2003

**Well No:** 9M  
**Surface Location:** 33-30N-8W, 820 FSL, 1820 FEL  
**Field:** Blanco Mesaverde/Basin Dakota  
**Bottom Location:** 33-30N-8W, 820 FSL, 1820 FEL

**OBJECTIVE:** Drill 230' below the top of the Two Wells Mbr., Dakota Fm., set 4 1/2" production liner, Stimulate DK, CH, MF and PL intervals

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Estimated GL: 6408'		Estimated KB: 6422'	
Rotary	0 - TD				
LOG PROGRAM		MARKER		MD	Subsea
TYPE	DEPTH INVERAL	Ojo Alamo		1991'	4431'
<u>OPEN HOLE</u>		Kirtland		2180'	4242'
None		Fruitland		2683'	3740'
		Fruitland Coal	*	2916'	3506'
		Pictured Cliffs	*	3124'	3298'
		Lewis	#	3362'	3060'
<u>CASED HOLE</u>		Cliff House	#	4624'	1798'
GR-CCL-TDT	TDT - TD to 7" shoe	Menefee	#	4930'	1492'
CBL	Identify 4 1/2" cement top	Point Lookout	#	5308'	1115'
		Mancos		5678'	744'
		Greenhorn		7305'	-883'
		Bentonite marker		7360'	-938'
		Two Wells Mbr.	#	7405'	-983'
		Paguate Mbr	#	7508'	-1086'
		Upper Cubero	#	7528'	-1106'
		Lower Cubero	#	7551'	-1129'
		Encinal Canyon	#	7593'	-1171'
		<b>TOTAL DEPTH</b>		<b>7635'</b>	<b>-1218'</b>
		# 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, #/gal	Vis, sec/qt	W/L cc's/30 min	Other Specification
0 - 120	Spud	8.6-9.2			
120 - 3462 (1)	Water/LSND	8.6-9.2		<6	
3462 - 7635	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	3462	7"	J/K-55 ST&C	20#	8.75"	1,2
Production	7635	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  
(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

<b>PREPARED BY:</b>	<b>APPROVED:</b>	<b>DATE:</b>	
HGJ/MNP/JMP		July 18, 2003	
Form 46 12-00 MNP		Version 1.0	

# BP America Production Company

## BOP Pressure Testing Requirements

Well Name: Gartner LS  
County: San Juan

9 M  
State: New Mexico

Formation	Est. MD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1991'		
Fruitland Coal	2916'		
PC	3124'		
Lewis Shale	3361'		
Cliff House	4624'	500	0
Menefee Shale	4930'		
Point Lookout	5308'	600	0
Mancos	5678'		
Dakota	7405'		
TD	7635'	2600	1500

\*\* 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

#### 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 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: Gartner LS 9M  
 Location: 33-30N-08W, 790 FSL, 1415 FEL  
 County: San Juan  
 State: New Mexico

Field: Blanco Mesaverde / Basin Dakota  
 API No.  
 Well Flac  
 Formation: Blanco Mesaverde/Basin Dakota  
 KB Elev (est) 6401  
 GL Elev. (est) 6387

## 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	13.5	9.625	ST&C	Surface	NA	
Intermediate	3462	8.75	7	LT&C	Surface	NA	
Production -	7635	6.25	4.5	ST&C	3362	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	2270	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 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		117 cuft
TOC@Surface	+ 3% CaCl <sub>2</sub> (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		0.4887 cuft/ft OH
	0.1% D46 antifoam		

Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /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
- 1 Stop Ring
- 1 Thread Lock Compound

# Cementing Program

## Intermediate:

Fresh Water	20 bbl	fresh water	
Lead		300 sx Class "G" Cement	768 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		160 LiteCrete D961 / D124 / D154	390 cuft
Slurry 1		+ 0.03 gps D47 antifoam	
TOC, 100' above 7" shoe		+ 0.5% D112 fluid loss	
		+ 0.11% D65 TIC	
Tail		150 sx 50/50 Class "G"/Poz	209 cuft
Slurry 2		+ 5% D20 gel (extender)	+ 5 #/sk D24 gilsonite
1457 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

Slurry Properties:	Density	Yield	Water
	(lb/gal)	(ft3/sk)	(gal/sk)
Slurry 1	9.5	2.52	6.38
Slurry 2	13	1.44	6.5

Top of Mancos

5678

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