Form 3160-3
(August 1999)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAR 2004 RECEIVED OIL CONS. DIV. DIST. 3

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. NMSF - 078194
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone	8. Lease Name and Well No. LUDWICK A 1M 812
2. Name of Operator BP AMERICA PRODUCTION COMPANY Contact: MARY CORLEY E-Mail: corleyml@bp.com	9. API Well No. 30045 32076
3a. Address P.O. BOX 3092 HOUSTON, TX 77253 — 3b. Phone No. (include area code) Ph: 281.366.4491 Fx: 281.366.0700	10. Field and Pool, or Exploratory BASIN DAKOTA/BLANCO MESAVER
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface SENW Lot F 2410FNL 1440FWL 36.47900 N Lat, 107.55700 W Lon At proposed prod. zone	11. Sec., T., R., M., or Blk. and Survey or Area F Sec 19 T30N R10W Mer NMP SME: BLM
14. Distance in miles and direction from nearest town or post office* 5.5 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) 1200 — 16. No. of Acres in Lease 304.57	17. Spacing Unit dedicated to this well 304.57 W/2
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1507 — 19. Proposed Depth 7459 MD	20. BLM/BIA Bond No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc. 6289 GL — 22. Approximate date work will start 01/30/2004	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	Name (Printed/Typed)	Date
(Electronic Submission)	MARY CORLEY	12/17/2003

Title: AUTHORIZED REPRESENTATIVE

Approved by (Signature)	Name (Printed/Typed) /s/ David J. Mankiewicz	Date MAR 17 2004
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 #26229 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".

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

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	2 Pool Code	3 Pool Name
30-045-31076	71599 & 72319	BASIN DAKOTA & BLANCO MESAVERDE

4 Property Code	5 Property Name	6 Well Number
000812	Ludwick A	# 1M

7 OGRID No.	8 Operator Name	9 Elevation
000778	BP AMERICA PRODUCTION COMPANY	6289

10 Surface Location

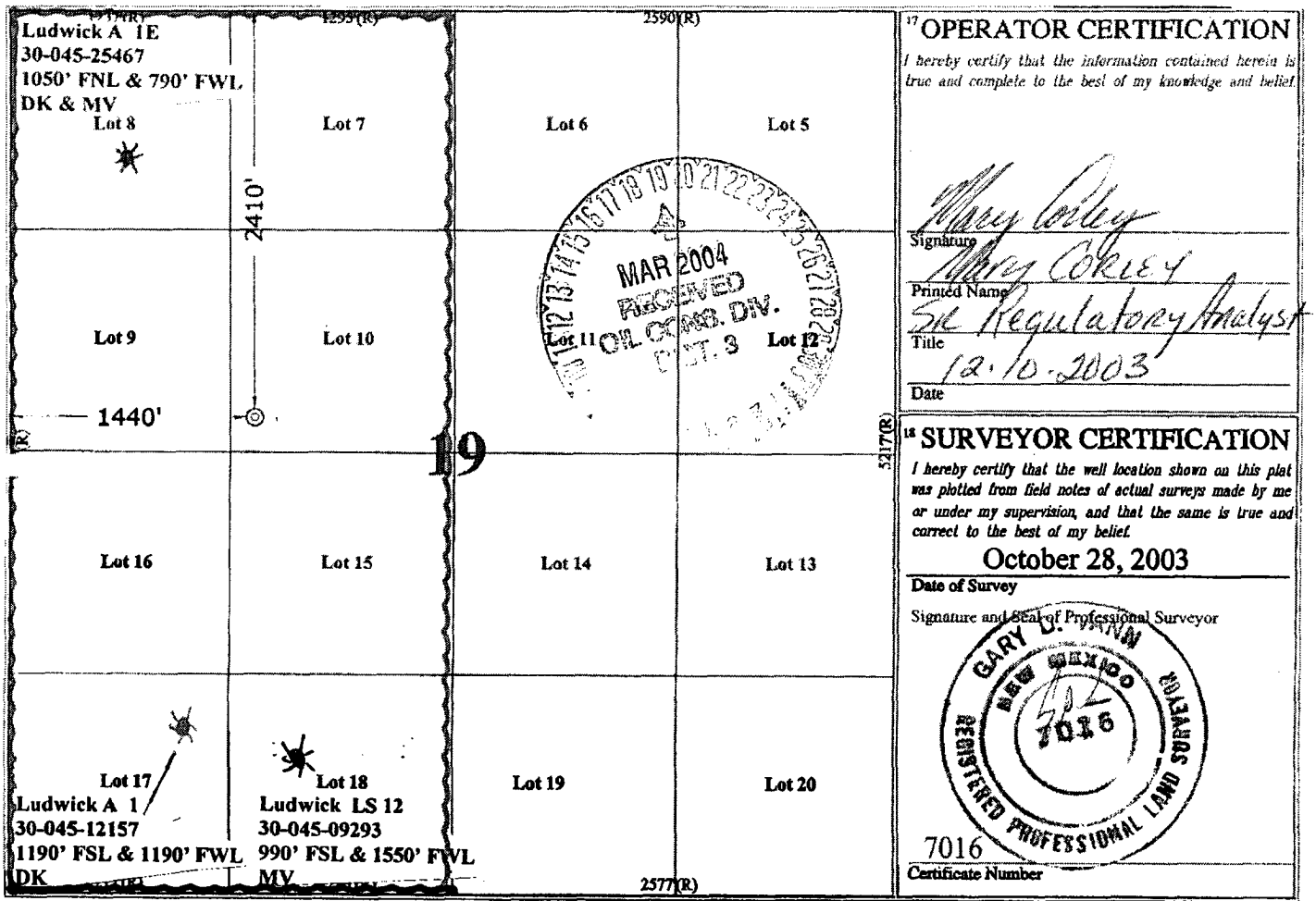
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F (Lot 10)	19	30 N	10 W		2410	NORTH	1440	WEST	SAN JUAN

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	13 Joint or Infill	14 Consolidation Code	15 Order No.
304.57			

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 Corley

Printed Name: Mary Corley

Title: Sr. Regulatory Analyst

Date: 12-10-2003

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.

Date of Survey: October 28, 2003

Signature and Seal of Professional Surveyor

GARY D. VANN
NEW MEXICO
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number: 7016

(R) – BLM Record

BP AMERICA PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name: **Ludwick A**
Lease: Ludwick A
County: San Juan
State: New Mexico

Well No: **1M**
Surface Location: 19-30N-10W, 2410 FNL, 1440 FWL

Field: Blanco Mesaverde/Basin Dakota

Date: November 3, 2003

OBJECTIVE: Drill 240' below the top of the Two Wells; set 41/2" production casing. Stimulate CH, MF, PL and DK intervals

METHOD OF DRILLING

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 - TD

LOG PROGRAM

TYPE	DEPTH INTERVAL
OPEN HOLE	
None	
CASED HOLE	
GR-CCL-TDT	TDT – TD to 7" shoe
CBL	Identify 4 ½" cement top

REMARKS:
- Please report any flares (magnitude & duration).

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Estimated GL: 6287 Estimated KB: 6301

MARKER		SUBSEA	TVD.
Ojo Alamo		4859'	1442'
Kirkland		4764'	1538'
Fruitland		4080'	2221'
Fruitland Coal	*	3861'	2440'
Pictured Cliffs	*	3497'	2804'
Lewis Shale	#	3280'	3021'
Cliff House	#	1955'	4346'
Menefee Shale	#	1714'	4588'
Point Lookout	#	1189'	5113'
Mancos		847'	5454'
Greenhorn		-801'	7102'
Bentonite Marker		-857'	7158'
Two Wells	#	-918'	7219'
Paguate	#	-1003'	7304'
Cubero Upper	#	-1051'	7352'
Cubero Lower	#	-1076'	7377'
Encinal Canyon	#	-1109'	7410'
TOTAL DEPTH		-1158'	7459'

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE
None

REMARKS:

DRILL CUTTING SAMPLES

FREQUENCY	DEPTH
10'	3121' -TD

DRILLING TIME

FREQUENCY	DEPTH
Geolograph	0-TD

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	- 3121	(1)	Water/LSND	8.6-9.2		<6	
3121	- 7459		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	3121	7"	J/K-55 ST&C	20#	8.75"	1,2
Production	7459	4 1/2"	J-55	11.6#	6.25"	3

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/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/JMP		November 3, 2003 Version 1.0	

Form 46 12-00 MNP

BP America Production Company
BOP Pressure Testing Requirements

Well Name: Ludwick A 1M
County: San Juan **State:** New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1442		
Fruitland Coal	2440		
PC	2804		
Lewis Shale	3021		
Cliff House	4346	500	0
Menefee Shale	4588		
Point Lookout	5113	600	0
Mancos	5454		
Dakota	7219	2600	1449

** Note: Determined using the following formula: ABHP – (.22*TVD) = ASP

Requested BOP Pressure Test Exception: ~~750 psi~~ 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 rigs 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	9", 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~~ 1500 psi (high pressure), upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP equipment will include kelly cock with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure.

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 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.**

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. We, therefore, 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.

See BLM General Requirements