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

# APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
SF - 078414

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
447

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

8. Lease Name and Well No.
DAY 3M

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

9. API Well No.
3004531320

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 MESAVERDE

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

At surface SWNE Lot G 2220FNL 1770FEL

At proposed prod. zone

11. Sec., T., R., M., or Blk. and Survey or Area
G Sec 17 T29N R8W Mer NMP

14. Distance in miles and direction from nearest town or post office*
8 MILES FROM BLANCO, 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)
870

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.
1320

19. Proposed Depth
7572 MD

20. BLM/BIA Bond No. on file
WY2924

21. Elevations (Show whether DF, KB, RT, GL, etc.
~~6211~~ 6446 GL

22. Approximate date work will start
02/01/2003

23. Estimated duration
7 DAYS

FEB 2003

## 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 | 01/14/2003 |

Title
AUTHORIZED REPRESENTATIVE

| Approved by (Signature) | Name (Printed/Typed) | Date |
|---|---|---|
| /s/ David J. Mankiewicz | | FEB 11 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 #17619 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

## Additional Operator Remarks:

The subject well was originally permitted as the Day B 1B on 11/03/1998 and re-permitted on 04/05/2000 as a Mesaverde completion.

Well location has already been prepared for drilling purposes in 1999.

Please note the change in well name from the Day B 1B to the Day 3M.

BP America Production Company respectfully request permission to drill the subject well to a total depth of approximately 7572', complete in the Basin Dakota Pool, produce the well for approximately 30 days to establish a production rate, then add a completion into the Blanco Mesaverde Pool and commingle production downhole.

Application for downhole commingling authority (NMOCD order R-11363) will be submitted to all appropriate parties for approval after production has been established in the Basin Dakota Pool and prior to completion of and downhole commingling with the Blanco Mesaverde.

SUPPLEMENTAL TO SURFACE USE PLAN

New facilities:

A 4 " diameter buried steel pipeline that is 388.92 feet in length will be constructed. The pipe wall thickness is .156 and the pipe wall strength is 42,000#. It will be adjacent to the access road and tie the Day B 1A gas well meter operated by BP America Production Company. The pipeline will not be used to transport gas to drill the well. After the well is spud the pipeline will be authorized by a right-of-way issued to El Paso Field Services, refer to the attached survey plat.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
311 South First,, Artesia, NM 88210
DISTRICTIII
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
2040 South Pacheco, Sante Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

**OIL CONSERVATION DIVISION**
2040 South Pacheco
Santa Fe, New Mexico 87505

Form C-102
**Revised October 18, 1994**
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

# WELL LOCATION AND ACREAGE DEDICATION PLAT

| API Number | Pool Code | Pool Name |
|---|---|---|
| 30-045-~~29721~~ 31320 | 71599 & 72319 | BASIN DAKOTA & Blanco Mesaverde |

| Property Code | Property Name | Well Number |
|---|---|---|
| 000420 | Day E | 3M E |

| OGRID No. | Operator Name | Elevation |
|---|---|---|
| 000778 | AMOCO PRODUCTION COMPANY | 6448' |

## Surface Location

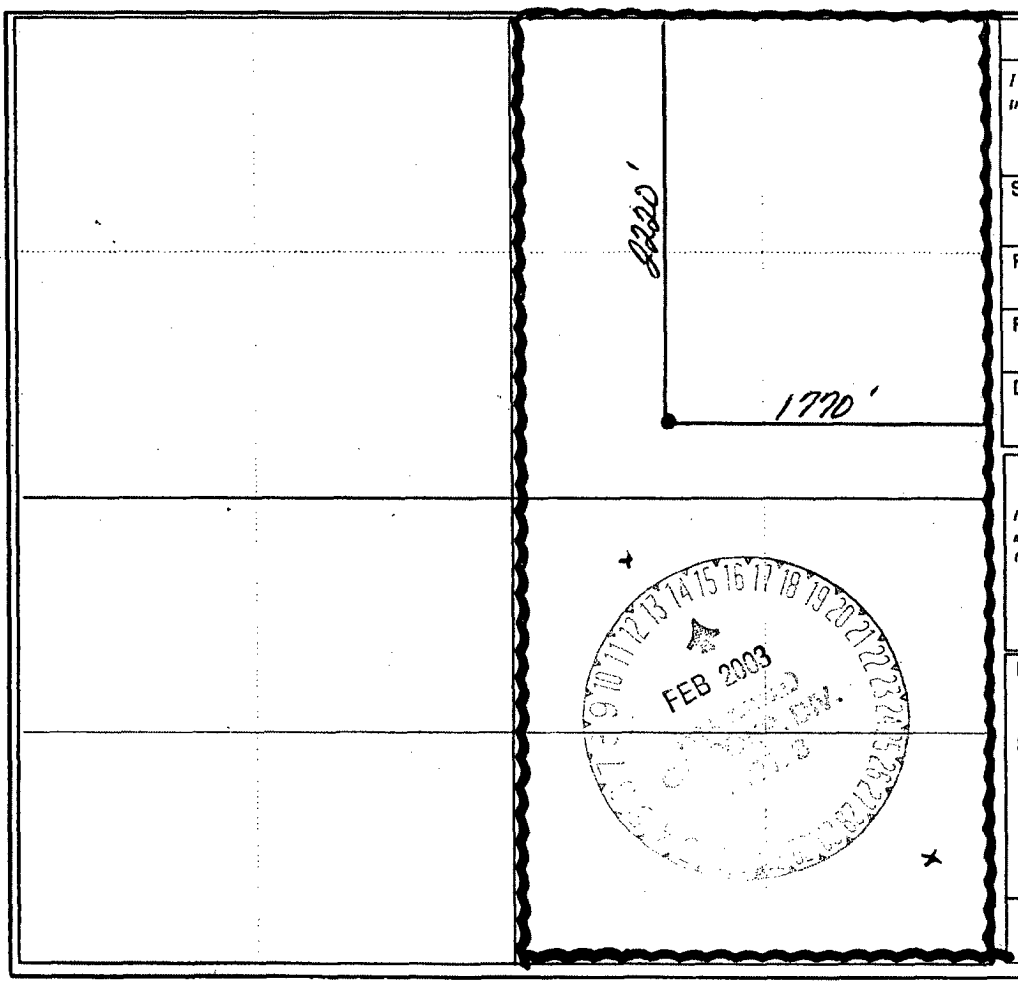
| UL or lot no. | Section | Township | Range | Lot. Idn | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|---|
| UNIT G | 17 | 29N | 8W | | 2220' | NORTH | 1770' | EAST | San Juan |

## 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 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| Dedicated Acreage: | Joint or Infill | Consolidation Code | Order No. |
|---|---|---|---|
| 320 | | | NSL-4146 |

**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**




## 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

Position: Sr. Business Analyst

Date: 03/29/2000

## SURVEY 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 knowledge and belief.*

08/26/1998

Date of Survey

Signature & Seal of Professional Surveyor

Gary D. Vann

Certificate No.
7016

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

**Prospect Name:** Day
**Lease:** Day
**County:** San Juan
**State:** New Mexico
**Date:** December 16, 2002

**Well No:** 3M
**Surface Location:** 17-29N-8W, 2220 FNL, 1770 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**

| TYPE OF TOOLS | DEPTH OF DRILLING |
|---|---|
| Rotary | 0 - TD |

**LOG PROGRAM**

| TYPE | DEPTH INVERAL |
|---|---|
| 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).

**SPECIAL TESTS**

Type: None

Remarks

**APPROXIMATE DEPTHS OF GEOLOGICAL MARKER**

Estimated GL: **6450'** Estimated KB: **6464'**

| MARKER | | SUBSEA | TVD |
|---|---|---|---|
| Ojo Alamo | | 4452' | 2012' |
| Kirtland | | 4252' | 2212' |
| Fruitland | | 3896' | 2568' |
| Fruitland Coal | * | 3594' | 2871' |
| Pictured Cliffs | * | 3378' | 3087' |
| Lewis | # | 3143' | 3321' |
| Cliff House | # | 1867' | 4597' |
| Menefee | # | 1602' | 4863' |
| Point Lookout | # | 1174' | 5290' |
| Mancos | | 929' | 5534' |
| Greenhorn | | -799 | 7263' |
| Graneros | | -858' | 7322' |
| DKOT/Two Wells | # | -893' | 7357' |
| Paguate | # | -1005' | 7469' |
| U.Cubero | # | -1026' | 7490' |
| L.Cubero | # | -1058' | 7522' |
| TOTAL DEPTH | | -1108 | 7572' |

# Probable completion interval * Possible Pay

| DRILL CUTTING SAMPLES | | DRILLING TIME | |
|---|---|---|---|
| Frequency | Depth | Frequency | Depth |
| none | Production hole | Geolograph | 0-TD |

**MUD PROGRAM:**

| Approx. Interval | | | Type Mud | Weight, #/ga | Vis, sec/qt | W/L cc's/30 min | Other Specification |
|---|---|---|---|---|---|---|---|
| 0 | - 200 | | Spud | 8.6-9.2 | | | |
| 200 | - 3421 | (1) | Water/LSND | 8.6-9.2 | | <6 | |
| 3421 | - 7572 | | 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 | 3421 | 7" | J/K-55 ST&C | 20# | 8.75" | 1,2 |
| Production | 7572 | 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 | | December 17, 2002<br>Version 1.0 | |

Form 46 12-00 MNP

# Cementing Program

| | | | |
|---|---|---|---|
| Well Name: | Day 3M | Field: | Blanco Mesaverde / Basin Dakota |
| Location: | 17-29N-8W, 2220 FNL, 1770 FEL | API No. | |
| County: | San Juan | Well Flac | |
| State: | New Mexico | Formation: | Dakota MesaVerde |
| | | KB Elev (est) | 6263 |
| | | GL Elev. (est) | 6249 |

**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 | 3421 | 8.75 | 7 | LT&C | Surface | NA | |
| Production - | 7572 | 6.25 | 4.5 | ? | 3321 | 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 |
|---|---|---|
| 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 |

Recommended Mud Properties Prio Cementing:

| | |
|---|---|
| PV | <20 |
| YP | <10 |
| Fluid Loss | <15 |

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 minmize 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 (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 | 290 sx | Class "G" Cement | 751 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 (lb/gal) | Yield (ft3/sk) | Water (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 centalizers @ base of Ojo
1 Top Rubber Plug
1 Thread Lock Compound

**Production:**

| | | | |
|---|---|---|---|
| Fresh Water | 10 bbl | CW100 | |
| Lead | 150 | LiteCrete D961 / D124 / D154 | 375 cuft |
| Slurry 1 | | + 0.03 gps D47 antifoam | |
| TOC, 100' above 7" shoe | | + 0.5% D112 fluid loss | |
| | | + 0.11% D65 TIC | |
| Tail | 160 sx | 50/50 Class "G"/Poz | 221 cuft |
| Slurry 2 | | + 5% D20 gel (extender) | + 5 #/sk D24 gilsonite |
| 1538 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 |

# BP America Production Company
# BOP Pressure Testing Requirements

**Well Name:** Day 3M
**County:** San Juan **State:** New Mexico

| Formation | TVD | Anticipated Bottom Hole Pressure | Maximum Anticipated Surface Pressure ** |
|---|---|---|---|
| Ojo Alamo | 2012' | | |
| Fruitland Coal | 2568' | | |
| PC | 3087' | | |
| Lewis Shale | 3143' | | |
| Cliff House | 4597' | 500 | 0 |
| Menefee Shale | 4863' | | |
| Point Lookout | 5290' | 600 | 0 |
| Mancos | 5534' | | |
| Dakota | 7357' | 2600 | 1400 |

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

Requested BOP Pressure Test Exception: 1500 psi

**SAN JUAN BASIN**
**Dakota Formation**
**Pressure Control Equipment**

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**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.**