Form 3160-3
(August 1999)

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

5. Lease Serial No.
NMSF - 078046

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

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.
HUGHES B 2B

2. Name of Operator
AMOCO PRODUCTION COMPANY
Contact: MARY CORLEY
E-Mail: corleym@bp.com

9. API Well No.
30-045-30937

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 SWSE Lot O 895FSL 1660FEL 36.47400 N Lat, 107.42800 W Lon

At proposed prod. zone NWNE Lot J 2350FSL 1800FEL 36.47400 N Lat, 107.42800 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
O Sec 19 T29N R8W Mer NMP

14. Distance in miles and direction from nearest town or post office*
20 MILES FROM BLOOMFIELD, NM

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)
895' FSL

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.

19. Proposed Depth
8037 MD
7724 TVD

20. BLM/BIA Bond No. on file

21. Elevations (Show whether DF, KB, RT, GL, etc.
6480 GL

22. Approximate date work will start
05/01/2002

23. Estimated duration

FEB 2002

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
11/29/2001

Title
AUTHORIZED REPRESENTATIVE

Approved by (Signature)
/s/ Maurice Johnson

Name (Printed/Typed)

Date
1/29/02

Title
AFM

Office
FFO

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 #9448 verified by the BLM Well Information System
For AMOCO PRODUCTION COMPANY, sent to the Farmington
Committed to AFMSS for processing by Maurice Johnson on 11/30/2001 ()

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

OPERATOR MUST BE IN COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

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

HOLD C104 FOR Directional Survey

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
30-045-30937	71599 / 72319	BASIN DAKOTA / BLANCO MESAVERDE

4 Property Code	5 Property Name	6 Well Number
000702	Hughes B	# 2B

7 OGRID No.	8 Operator Name	9 Elevation
000778	AMOCO PRODUCTION COMPANY	6480

10 Surface Location

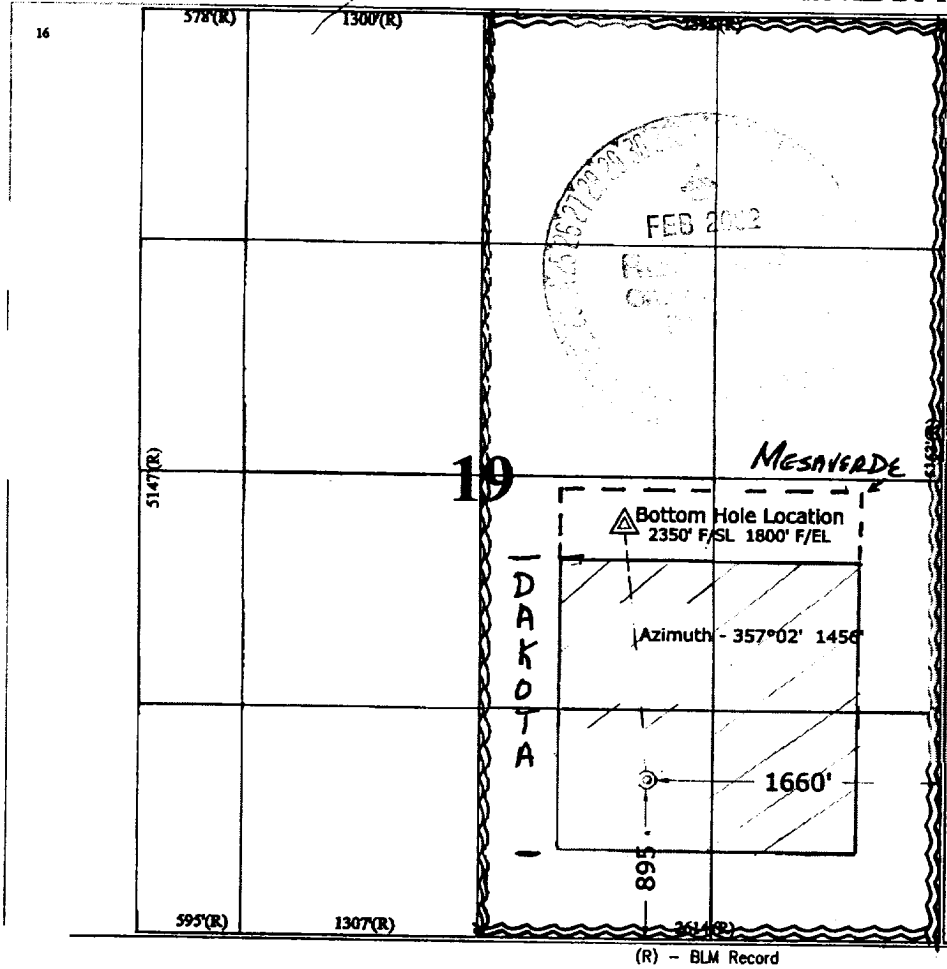
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	19	29 N	8 W		895	SOUTH	1660	EAST	SAN JUAN

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
J	19	29 N	8 W		2350	SOUTH	1800	EAST	SAN JUAN

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
DK 309 MV 320			

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



(R) – BLM Record

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 Specialist
Title

11-29-2001
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.

November 6, 2001
Date of Survey

Signature and Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

7016
Certificate Number

AMOCO
PRODUCTION COMPANY

Hughes B # 2B
SE¼ Section 19,
T29N, R8W, N.M.P.M.

No New Road Construction

APD MAP # 1

AMOCC PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name: Hughes B
Lease: HUGHES B
County: San Juan
State: New Mexico
Date: November 29, 2001

Well No: 2B
Surface Location: 19-29N-8W, 895 FSL,1660 FEL
Field: Blanco Mesaverde/Basin Dakota
Bottom Hole Location: 19-29N-8W, 2350 FSL, 1800 FEL

OBJECTIVE: Drill 400' below the base of the Greenhorn Limestone, set 41/2" production casing, Stimulate LS, CH, MF, PL and DK intervals

METHOD OF DRILLING

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 - TD

LOG PROGRAM

TYPE	DEPTH INVERAL
OPEN HOLE	
GR-Induction	TD to 7" shoe
Density/Neutron	TD to 7" shoe
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: 6492 Estimated KB: 6506

MARKER		TVD	MEAS. DEPTH
Ojo Alamo		1903	2031
Fruitland Coal	*	2716	2933
Pictured Cliffs	*	3069	3324
Lewis Shale	#	3176	3443
Cliff House	#	4665	4964
Menefee Shale	#	4823	5122
Point Lookout	#	5254	5553
Mancos		5681	5980
Greenhorn		7274	7573
Bentonite Marker		7338	7637
Two Wells	#	7386	7685
Dakota MB	#	7508	7807
Burro Canyon	*	7598	7897
Morrison	*	7738	
TOTAL DEPTH		7724	8037

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE
None

REMARKS:

DRILL CUTTING SAMPLES

FREQUENCY	DEPTH
10 feet	Production hole

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	- 200		Spud	8.6-9.2			
200	- 3554	(1)	Water/LSND	8.6-9.2		<6	
3554	- 8037		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#	12.25"	1 -
Intermediate 1	3554	7"	J/K-55 ST&C	20#	8.75"	1,2 -
Production	8037	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, 4-6 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		26, Nov 2001 Version 1.0	

Form 46 12-00 MNP

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 impart a swirling action around the casing and 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.

Amoco Production Company
BOP Pressure Testing Requirements

Well Name: Hughes B 2B
County: San Juan State: New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1903		
Fruitland Coal	2716		
PC	3069		
Lewis Shale	3176		
Cliff House	4665	500	0
Menefee Shale	4823		
Point Lookout	5254	600	0
Mancos	5681		
Dakota	7386	2600	1350

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

Requested BOP Pressure Test Exception: 3000 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.