

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL DEEPEN

b. TYPE OF WELL OIL GAS WELL OTHER SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR AMOCO PRODUCTION COMPANY
P.O. BOX 3092
HOUSTON, TX 77079

3. ADDRESS AND TELEPHONE NO.
MARY CORLEY
AUTHORIZED REPRESENTATIVE

PHONE 281.366.4491
FAX: 281.366.0700
EMAIL: corleym@hp.com

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At Surface
2195FNL AND 1390FEL NWSE SEC 28 T32N R11W
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM THE NEAREST TOWN OR POST OFFICE
13 MILES FROM AZTEC

15. DISTANCE FROM PROPOSED*
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drilg. unit line, if any)

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE FT.

16. NO. ACRES IN LEASE
320.00

19. PROPOSED DEPTH
7762 MD / TVD 7852

17. NO. OF ACRES ASSIGNED
TO THIS WELL
320.00

20. ROTARY OR CABLE TOOLS
ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

6248 GL

22. APPROX. DATE WORK WILL START*
05/20/2001

PROPOSED CASING AND CEMENTING PROGRAM				
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT

Notice of Staking Submitted 02/26/2001 as the Fields A well 4M. Please change lease name to Fields well # 4M. Amoco Production Company respectfully request permission to drill the subject well to a total depth of approximately 7762', complete in the Basin Dakota Pool, produce the well for approximately 30 days to establish production rate, add 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. Please see attached documents in support of our application

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

THIS ACTION IS SUBJECT TO TECHNICAL AND
PROCEDURAL REVIEW PURSUANT TO ATTACHED
GENERAL REQUIREMENTS.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. ELECTRONIC SUBMISSION #3597 VERIFIED BY THE BLM WELL INFORMATION SYSTEM
FOR AMOCO PRODUCTION COMPANY SENT TO THE FARMINGTON FIELD OFFICE
SIGNED MARY CORLEY TITLE AUTHORIZED REPRESENTATIVE DATE 04/11/2001

PERMIT NO. _____

APPROVAL DATE _____

Application approval 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.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY /s/ Lee Otteni

TITLE Hold crew for Basin Dakota NSL DATE 6/8/01

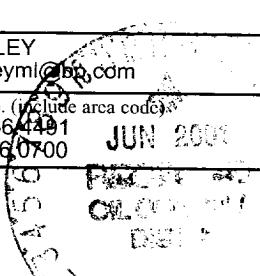
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.*

FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000

5. Lease Serial No.
NM - 010989
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPPLICATE - Other instructions on reverse side.

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other	8. Well Name and No. FIELDS 4M	
2. Name of Operator AMOCO PRODUCTION COMPANY	Contact: MARY CORLEY E-Mail: corleym@blm.gov	9. API Well No.
3a. Address P.O. BOX 3092 HOUSTON, TX 44253	3b. Phone No. (Include area code) Ph: 281.366.4481 Fx: 281.366.0700	10. Field and Pool, or Exploratory BASIN DAKOTA/BLANCO MESAVERDE
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 28 T32N R11W Mer NWSE 36.57300 N Lat, 107.59400 W Lon		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"/> APDCH
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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 recomplete 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 recompletion 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.)

Application for Permit to Drill for the subject well was submitted on 04/11/2001. Amoco Production Company respectfully submits for your approval amendments to our drilling and completion Program as per the attached two (2)documents. The major change is in the casing and cementing program.

The subject well also requires NMOCD approval for a Non-Standard drilling location for the Basin Dakota completion. A request for an exception to Non-Standard is being submitted to the NMOCD under a separate application.

14. I hereby certify that the foregoing is true and correct. Electronic Submission #4549 verified by the BLM Well Information System For AMOCO PRODUCTION COMPANY, sent to the Farmington Committed to AFMSS for processing by Maurice Johnson on 05/30/2001 ()	
Name (Printed/Typed) MARY CORLEY	Title AUTHORIZED REPRESENTATIVE
Signature	Date 05/27/2001

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____	Title _____	Date 6/11/01
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.

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

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 <i>30-045-30633</i>	² Pool Code 71599 & 72319	³ Pool Name BASIN DAKOTA & BLANCO MESAVERDE	
⁴ Property Code 000510	⁵ Property Name Fields		⁶ Well Number # 4M
⁷ OGRID No. 000778	⁸ Operator Name AMOCO PRODUCTION COMPANY		⁹ Elevation 6248

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
J	28	32 N	11 W		2195	SOUTH	1390	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

¹² UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹³ Dedicated Acres 320.00	¹⁴ Joint or Infill				¹⁵ 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

¹⁶	¹⁷ OPERATOR CERTIFICATION <i>Mary Corley</i> Signature MARY CORLEY Printed Name SR. REGULATORY ANALYST Title 04/09/2001 Date
¹⁸	¹⁹ SURVEYOR CERTIFICATION <i>GARY D. WILSON</i> Signature and Seal of Professional Surveyor GARY D. WILSON NEW MEXICO 7016 REGISTERED PROFESSIONAL LAND SURVEYOR 7016 Certificate Number

5066-9
5678-9
5011213141516171819
RECEIVED
CHIEF SURVEYOR
DIST. 3
JUN 2001
28
1390'
2195'
4A'
5049'
5250(R)

AMOCO PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name: Fields
Lease: FIELDS
County: San Juan
State: New Mexico
Date: May 27, 2001

Well No: 4M
Surface Location: 28-32N-11W, 2195 FSL, 1390 FEL
Field: Blanco Mesaverde/Basin Dakota

OBJECTIVE: Drill 450' below the base of the Greenhorn Limestone, set 4 1/2" production casing, Stimulate LS, CH, MF, PL and DK intervals

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
		Estimated GL:	6248	Estimated KB:	6262
TYPE OF TOOLS	DEPTH OF DRILLING	MARKER		SUBSEA	MEAS. DEPTH
Rotary	0 - TD	Ojo Alamo		4406	1857
LOG PROGRAM	DEPTH INVERAL	Fruitland Coal	*	3951	2312
TYPE		Pictured Cliffs	*	3298	2964
OPEN HOLE		Lewis Shale	#	3251	3012
GR-Induction	TD to 7" shoe	Cliff House	#	1538	4724
Density/Neutron	TD to 7" shoe	Menefee Shale	#	1384	4878
CASED HOLE		Point Lookout	#	1010	5253
GR-CCL-TDT	TDT – TD to 7" shoe	Mancos		881	5382
CBL	Identify 4 1/2" cement top	Greenhorn		-1050	7312
REMARKS:		Bentonite Marker		-1100	7362
- Please report any flares (magnitude & duration).		Two Wells	#	-1160	7422
		Dakota MB	#	-1270	7532
		Burro Canyon	*	-1415	7677
		Morrison	*	-1465	7727
		TOTAL DEPTH		-1590	7852
		# Probable completion interval		* Possible Pay	
SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE		FREQUENCY	DEPTH	FREQUENCY	DEPTH
None		10 feet	Production hole	Geograph	0-TD
REMARKS:					

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 - 3112	Water/LSND	8.6-9.2		<6		
3112 - 7677	Gas/Air/N2/Mist		Volume sufficient to maintain a stable and clean wellbore			
7677 - 7852	LSND	9.0-9.2		<6		

REMARKS:						
(1) The hole will require sweeps to keep unloaded while fresh water drilling. Let hole conditions dictate frequency.						
(2) Mud up 50' above Morrison +/-.						
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	3112	7"	J/K-55 ST&C	20#	8.75"	1,2
Production	7852	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/KAT		May 3, 2001				
Form 46 12-00 KAT		Version 3.0				

BOP Test Pressure

Amoco Production Company
BOP Pressure Testing Requirements

Well Name: Fields 4M
County: San Juan State: New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1857		
Fruitland Coal	2312		
PC	2964		
Lewis Shale	3012		
Cliff House	4724	500	0
Menefee Shale	4878		
Point Lookout	5253	600	0
Mancos	5382		
Dakota	7422	2600	1416

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

Requested BOP Pressure Test Exception: 3000 psi

Cementing Program

Well Name:	Fields 4M	Field:	Blanco Mesaverde / Basin Dakota
Location:	28-32N-11W, 2195 FSL, 1390 FEL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	Dakota MesaVerde
		KB Elev (est)	6262
		GL Elev. (est)	6248

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	3112	8.75	7	LT&C	Surface	NA	
Production -	7812	6.25	4.5	?	3012	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	Recommended Mud Properties Prio Cementing:
			PV <20
			YP <10
0 - SCP	Water/Spud	8.6-9.2	Fluid Loss<15
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 %, Bit	100%	80	10
Excess %, Caliper	NA	NA	30
BHST (est deg. F)	60	120	160
Pipe Movement	NA	Rotate/Reciprocate	Rotate/Reciprocate
Rate, Max (bpm)	7	4	2
Rate Recommended (bpm)	6	4	2
Pressure, Max (psi)	200	2000	2000
Shoe Joint	40	80	40
Batch Mix	NA	NA	NA
Circulating prior cmtng (hr)	0.5	1.5	2
Time Between Stages, (hr)	NA	NA	NA
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.
*** Run TMD cased hole logs to identify pay; Perforating and CH logs can be run regardless.

Surface:

Preflush 20 bbl. FreshWater

Cementing Program

Slurry 1 TOC@Surface	108 sx Class G Cement + 2% CaCl2 (accelerator) 0.25#/sk Cellophane Flake (lost circulation additive) 0.1% D46 antifoam	125 cuft 0.3132 cuft/ft OH 100 % excess
Slurry Properties:	Density (lb/gal)	Yield (ft ³ /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 4 Centralizers 1 Stop Ring 1 Thread Lock Compound	
<hr/>		
Intermediate:		
Fresh Water	20 bbl	fresh water
Lead Slurry 1 TOC@Surface	237 sx Class "G" Cement + 3% D79 extender + 2% S1 Calcium Chloride + 1/4#/sk. Cellophane Flake + 0.1% D46 antifoam'	687 cuft
Tail Slurry 2	107 sx 50/50 Class "G"/Poz + 2% gel (extender) 0.1% D46 antifoam + 1/4#/sk. Cellophane Flake + 2% CaCl2 (accelerator)	135 cuft 0.1503 cuft/ft OH 0.1746 cuft/ft csg ann 80 % excess
Slurry Properties:	Density (lb/gal)	Yield (ft ³ /sk)
Slurry 1	11.4	2.9
Slurry 2	13.5	1.27
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 10 Centralizers (one in middle of first joint, then every third collar) 2 Fluidmaster vane centralizers @ base of Ojo 7 Centralizers one every 4th joint from Ojo to base of surface casing 1 Top Rubber Plug 1 Thread Lock Compound	
<hr/>		

Production:	Fresh Water	10 bbl	CW100
Lead Slurry 1 TOC@Surface	146 LiteCrete D961 / D124 / D154 + 0.03 gps D47 antifoam + 0.5% D112 fluid loss	313 cuft	

Cementing Program

+ 0.11% D65 TIC				
Tail				218 cuft
Slurry 2	151 sx 50/50 Class "G"/Poz			+ 5#/sk D24 gilsonite
1930 ft fill	+ 5% D20 gel (extender)			+ 0.15% D65 TIC
	+ 0.1% D46 antifoam			+ 0.1% D800 retarder
	+ 1/4#/sk. Cellophane Flake			
	+ 0.25% D167 Fluid Loss			
Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)	0.1026 cuft/ft OH 10 % excess
Slurry 1	9.5	2.14	6.38	0.1169 cuft/ft csg ann
Slurry 2	13	1.44	6.5	Top of Mancos
Casing Equipment:	4-1/2", 8R, ST&C			5382
1 Float Shoe (autofill with minimal LCM in mud) 1 Float Collar (autofill with minimal LCM in mud) 1 Stop Ring 39 Centralizers (every third joint)				
1 Top Rubber Plug 1 Thread Lock Compound				

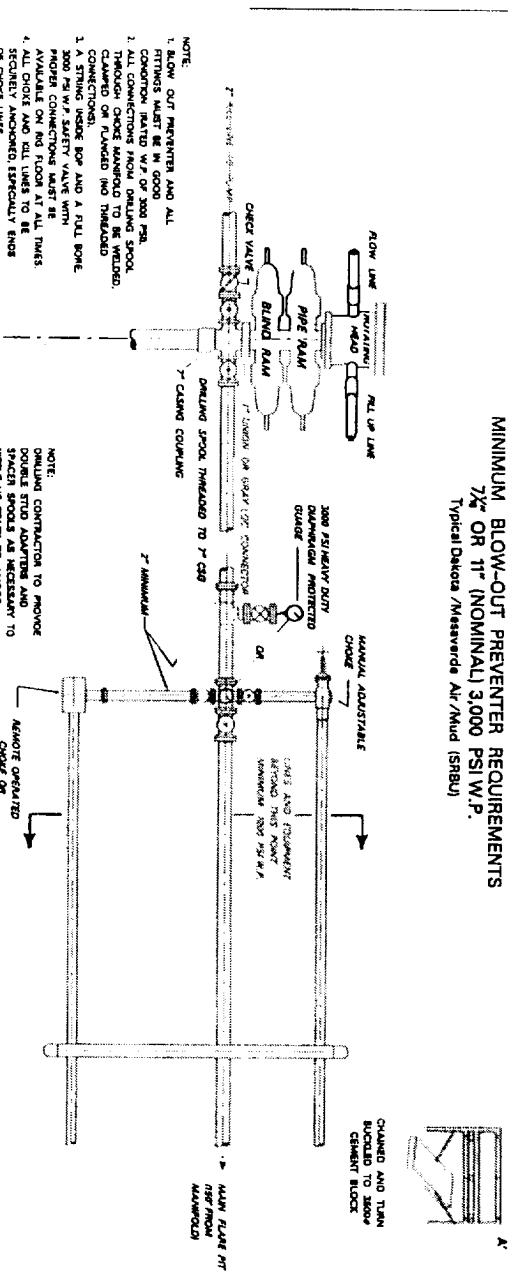
Note:

1. The job should be pumped at 2-3 bpm max rate. Do not exceed 3 bpm on displacement
2. Wash pump and lines before displacement. Slow to 1 bpm for the last 30 bbl of displacement.

MINIMUM BLOW-OUT PREVENTER REQUIREMENTS

IN UK II (NUMINAL) 3,000 PSI W
Typical Dakota /Mesaverde Air /Mud (SRBU)

Typical Dakota /Mesaverde Air /Mud (SRBU)



NOTE:
1. ALL UNMARKED VALVES TO BE FULL-OPENING
GATE OR PLUG VALVES, METAL TO METAL SEAL
3000 PSI W.P.

1. CHOLE ASSEMBLY VERTICAL FOR ILLUSTRATION ONLY. SHOULD BE HORIZONTAL ON RAIL. ANCHOR ALL LINES SECURELY EVERY 30' AND WITHIN 5' OF END OF LINE.
2. DRILLING CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING ALL LINES AND VALVES.

2rcs11/bjow, ex

