Form 3160-5
(August 1999)

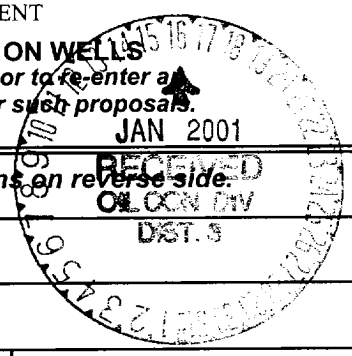
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM 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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.



5. Lease Serial No.
SF - 078039

6. If Indian, Allottee or Tribe Name

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

1. Type of Well ☐ Oil Well ☒ Gas Well Other

8. Well Name and No.
BARNES LS 8M

2. Name of Operator
AMOCO PRODUCTION COMPANY

9. API Well No.
3004530349

3a. Address
P.O. BOX 3092
HOUSTON, TX 77079

3b. Phone No. *(include area code)*
281.366.4491

10. Field and Pool, or Exploratory Area
BASIN DAKOTA/BLANCO MESAVERDE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
1030FWL 710FSL M - 26-32N-11W

11. County or Parish, and State
SAN JUAN NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ APDCH
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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 files 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.)

The subject well was originally permitted on 9/29/2000 to be drilled and completed into the Blanco Mesaverde Pool as Barnes LS Well No. 8B. Please change the well number from 8B to 8M. Additionally, Amoco Production Company respectfully submits this request to amend permit application to deepen into the Basin Dakota Pool (TD 7845'), complete and produce the well for approximately 90 to 120 days to establish production rate, then add the Blanco Mesaverde Pool and commingle production downhole. Application for Downhole Commingling covered under NMOCD order R - 11363 dated 4/26/2000, will be submitted to all appropriate parties for approval after production has been established for the Basin Dakota Pool and prior to downhole commingling with the Mesaverde. Please see attachments in support of our revised drilling and completion program.

Electronic Submission #2288 verified by the BLM Well Information System for AMOCO PRODUCTION COMPANY Sent to the Farmington Field Office
Committed to AFMSS for processing by Maurice Johnson on 01/09/2001

Name *(Printed/Typed)* MARY CORLEY — Title SUBMITTING CONTACT

Signature — Date 01/09/2001

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By /s/ Jim Lovato — Title — Date JAN 11 2001

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

NMOCD

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
30-045-30349	71599 & 72319	Basin Dakota & Blanco Mesaverde

Property Code	Property Name	Well Number
000300	Barnes LS	8M

OGRID No.	Operator Name	Elevation
000778	AMOCO PRODUCTION COMPANY	

Surface Location

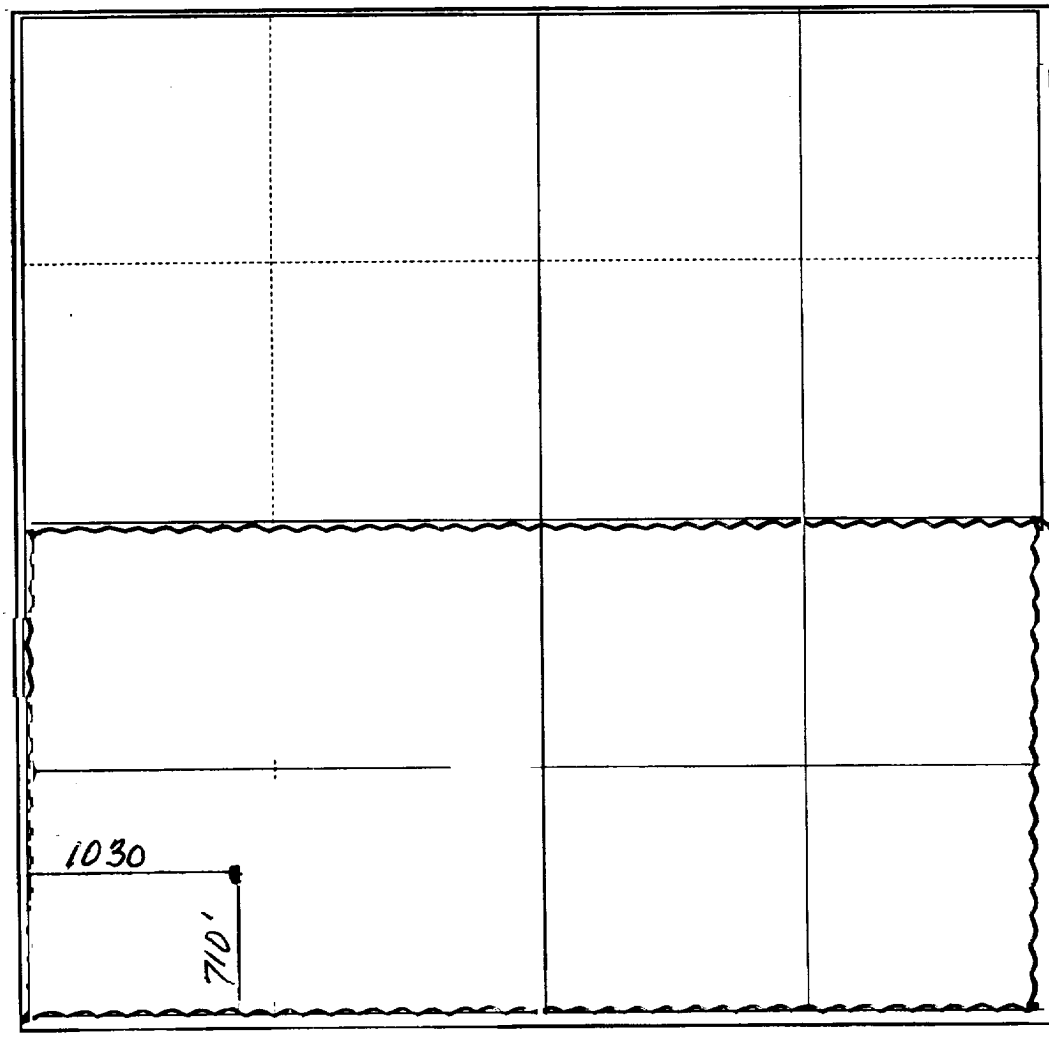
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
UNIT M	26	32N	11W		710'	SOUTH	1030'	WEST	San Juan

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			

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 informtion contained herein is true and complete to the best of my knowledge and belief

Signature: Mary Corley

Printed Name: Mary Corley

Position: Sr. Regulatory Analyst

Date: 01/09/2001

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.

Date of Survey: 06/29/2000

Signature & Seal of Professional Surveyor: Gary D. Vann

Certificate No.: 7016

Cementing Program

Well Name:	Barnes LS 8B	Field:	Dakota MesaVerde
Location:	26-32N-11W, 710 FSL, 1030 FWL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	Dakota MesaVerde
		KB Elev (est)	6342
		GL Elev. (est)	6331

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	125	14.75	10.75	ST&C	Surface	NA	
Intermediate	2627	9.875	7.625	LT&C	Surface	NA	
2nd Int.	6800	6.75	5.5	ST&C	2400	NA	
(liner)	7500	4.75	4	ST&C	6500	6700	

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	10.75	48	K-55	3580	2090	423	0.095	9.9
Intermediate	7.625	26.4	K-55	4140	2890	309	0.0472	6.241
Production -	5.5	15.5	K-55	4810	4040	146	0.0238	3.927
(liner)	4	11	K-55	6304	?	?	0.01174	3.476

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	I2	Liner
Excess %, Bit	100%	80	50	10
Excess %, Caliper	NA	NA	NA	30
BHST (est deg. F)	60	120	150	160
Pipe Movement	NA	Rotate/Reciprocatotate/Reciproca s per Liner Co.		
Rate, Max (bpm)	7	4	4	2
Rate Recommended (bpm)	6	4	3	2
Pressure, Max (psi)	200	2000	2000	2000
Shoe Joint	40	80	80	40
Batch Mix	NA	NA	NA	NA
Circulating prior cmtng (hr)	0.5	1.5	2.5	2
Time Between Stages, (hr)	NA	NA	NA	NA
Special Instructions	1,6,7	1,6,8	1,6,9	2,3,4,6

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 liner cement job to minmize drillout.
** After cement set time the liner top will be drilled out and liner circulated clean with treated water.
*** Run TMD cased hole logs to identify pay; Perforating and CH logs can be run rigless.

Surface:

Preflush	20 bbl.	FreshWater

Cementing Program

Slurry 1	130 sx Class G Cement		151 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		
	0.1% D46 antifoam		

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	15.8	1.16	4.95

Casing Equipment:

10-3/4", 8R, ST&C
1 Guide Shoe
1 Top Wooden Plug
1 Autofill insert float valve
4 Centralizers
1 Stop Ring
1 Thread Lock Compound

Intermediate:

Fresh Water	20 bbl	fresh water	
Lead	280 sx Class "G" Cement		812 cuft
Slurry 1	+ 3% D79 extender		
TOC@Surface	+ 2% S1 Calcium Chloride		
	+1/4 #/sk. Cellophane Flake		
	+ 0.1% D46 antifoam'		
Tail	150 sx 50/50 Class "G"/Poz		191 cuft
Slurry 2	+ 2% gel (extender)		
500' fill	0.1% D46 antifoam		
	+1/4 #/sk. Cellophane Flake		
	+ 2% CaCl2 (accelerator)		

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	11.4	2.9	17.77
Slurry 2	13.5	1.27	5.72

Casing Equipment:

7-5/8", 8R, ST&C

1 Float Shoe (autofill with minimal LCM in mud)
1 Float Collar (autofill with minimal LCM in mud)
1 Stop Ring
9 Centralizers (one in middle of first joint, then every third collar)
2 Fluidmaster vane centalizers @ base of Ojo
8 Centalizers one every 4th joint from Ojo to base of surface casing
1 Top Rubber Plug
1 Thread Lock Compound

Int 2:

Fresh Water	10 bbl	CW100	
Lead	140 LiteCrete D961 / D124 / D154		300 cuft
Slurry 1	+ 0.03 gps D47 antifoam		

Cementing Program

TOC@Surface		+ 0.5% D112 fluid loss	
		+ 0.11% D65 TIC	
Tail	175	sx 50/50 Class "G"/Poz	252 cuft
Slurry 2		+ 5% D20 gel (extender)	+ 5 #/sk D24 gilsonite
500' fill		+ 0.1% D46 antifoam	+ 0.15% D65 TIC
		+ 1/4 #/sk. Cellophane Flake	+ 0.1% D800 retarder
		+ 0.25% D167 Fluid Loss	

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	9.5	2.14	6.38
Slurry 2	13	1.44	6.5

Casing Equipment: 5-1/2", 8R, ST&C

1 Float Shoe (autofill with minimal LCM in mud)
1 Float Collar (autofill with minimal LCM in mud)
1 Stop Ring
35 Centralizers (every third joint

1 Top Rubber Plug
1 Thread Lock Compound

Production (liner):

Preflush	10 bbl.	CW100 / LCM wash		
Lead Cement	50	50/50 Poz/G		72 cuft
Slurry 1		5% D20 bentonite	0.1% D46 antifoam	
TOC @		0.25#/sk D29 cellophane		
(200' above TOL)		0.25% D167 Fluid loss		
		0.15% D65 TIC		
		0.15% D800 retarder		

Slurry Properties:	Density (lb/gal)		Water (gal/sk)
		(ft3/sk)	
Slurry 1	13	1.44	6.5

Liner Float Equipment: Float Shoe and Float Collar (furnished by Liner Hanger Company)
1 Thread Lock Compound

Note:

1. Coordinate w/Liner hand to drop plug, or set/release Liner as required
2. The job should be pumped at 2-3 bpm max rate. Do not exceed 3 bpm on displacement
3. Wash pump and lines before displacement. Slow to 1 bpm for the last 30 bbl of displacement.
4. This is to be a rigless completion. After cement set time, liner top will be dressed off an liner circulated clean with 2 % KCl or 2 gal/1000 gal L64.

AMOCO PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name: Barnes LS
Lease: BARNES LS
County: San Juan
State: New Mexico
Date: January 9, 2001

Well No: 8M
Surface Location: 26-32N-11W, 710 FSL,1030 FWL
Field: Blanco Mesaverde/Basin Dakota

OBJECTIVE: Drill 400' below the base of the Greenhorn Limestone, set 4" Liner across Dakota, 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 5 ½" shoe
Density/Neutron	TD to 5 ½" shoe
Sonic	TD to 5 ½" shoe
CASED HOLE	
GR-CCL-TDT	TDT - PBTD-7 5/8" shoe
	GR-CCL - PBTD-0'
CBL	Top of 4" - 50' above 7 5/8 "shoe

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

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Estimated GL: 6331 Estimated KB: 6345

MARKER		SUBSEA	MEAS. DEPTH
Ojo Alamo		4500	1845
Fruitland Coal	*	3665	2680
Pictured Cliffs	*	3250	3095
Lewis Shale	#	3125	3220
Cliff House	#	1446	4899
Menefee Shale	#	1359	4987
Point Lookout	#	986	5359
Mancos		770	5575
Greenhorn		-1050	7395
Bentonite Marker		-1100	7445
Two Wells	#	-1165	7510
Cubero	#	-1268	7613
Burro Canyon	*	-1275	7620
Morrison	*	-1350	7695
TOTAL DEPTH		-1500	7845

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, #/gal	Vis, sec/qt	W/L cc's/30 min	Other Specification
0	- 120-135	3 jts.	Spud	8.6-9.2			
120-135	- 2630	(1)(2)	Water/LSND	8.6-9.2			
2630	- 7445		Gas/Air/Mist	Volume sufficient to maintain a stable and clean wellbore			
7445	7845		LSND	8.6-9.2			

REMARKS:
(1) The hole will require sweeps to keep unloaded while fresh water drilling. Let hole conditions dictate frequency.
(2) Top set Fruitland Coal to minimize lost circulation, air volume to maintain hole stability.

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	120-135	10 3/4"	J-55 ST&C	40.5#	14.75"	1
Intermediate 1	2630	7 5/8"	K-55 LT&C	26.4#	9.875"	1,2
Intermediate 2	7445	5 ½"	K-55 LT&C	15.5#	6.75"	4
Production (liner)	7845	4"	K-55 H 511	11#	4.75"	3

REMARKS:
(1) Circulate Cement to Surface
(2) Set casing 50' above Fruitland Coal
(3) Liner Lap should be a minimum of 100'
(4) Bring cement 200' above 7 5/8" 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:	
KAS/KAT		December 21, 2000 Version 1.0	

Form 46 12-00 KAT