

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

1a. Type of Work: ☒ DRILL ☐ REENTER

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

2. Name of Operator
AMOCO PRODUCTION COMPANY
Contact: MARY CORLEY
E-Mail: corleym1@bp.com

3a. Address
P.O. BOX 3092
HOUSTON, TX 77253

3b. Phone No. (include area code)
Ph: 281.366.4491 Fx: 281.366.0700

8. Lease Name and Well No.
FLORANCE T 123N

9. API Well No.
30-095-30756

10. Field and Pool, or Exploratory
BLANCO MESAVERDE

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface SENW Lot F 2215FNL 2090FWL 36.45300 N Lat, 107.39900 W Lon
At proposed prod. zone SENW Lot F 2200FNL 1500FWL 36.45300 N Lat, 107.39900 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
F Sec 3 T29N R8W Mer NMP

14. Distance in miles and direction from nearest town or post office*
19 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)
510

16. No. of Acres in Lease
324.16

17. Spacing Unit dedicated to this well
324.16 W2

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth
5850 TWC
5909 MD

20. BLM/BIA Bond No. on file

21. Elevations (Show whether DF, KB, RT, GL, etc.)
6171 GL

22. Approximate date work will start
08/25/2001

23. Estimated duration

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)
MARY CORLEY

Date
07/24/2001

Title
AUTHORIZED REPRESENTATIVE

Approved by (Signature)

/s/ Joel Farrell

Name (Printed/Typed)

AUG 16 2001

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 #5908 verified by the BLM Well Information System
For AMOCO PRODUCTION COMPANY, sent to the Farmington
Committed to AFMSS for processing by Geneva McDougall on 07/26/2001 ()

procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4

SECRET TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"

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

HOLD C104 FOR Directional survey and NSL, if needed

NMOCO

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 30-045-30756	² Pool Code 72319	³ Pool Name BLANCO MESA VERDE
⁴ Property Code 000 552	⁵ Property Name Florance T	⁶ Well Number # 123/V
⁷ OGRID No. 000 778	⁸ Operator Name AMOCO PRODUCTION COMPANY	⁹ Elevation 6171

¹⁰ Surface Location

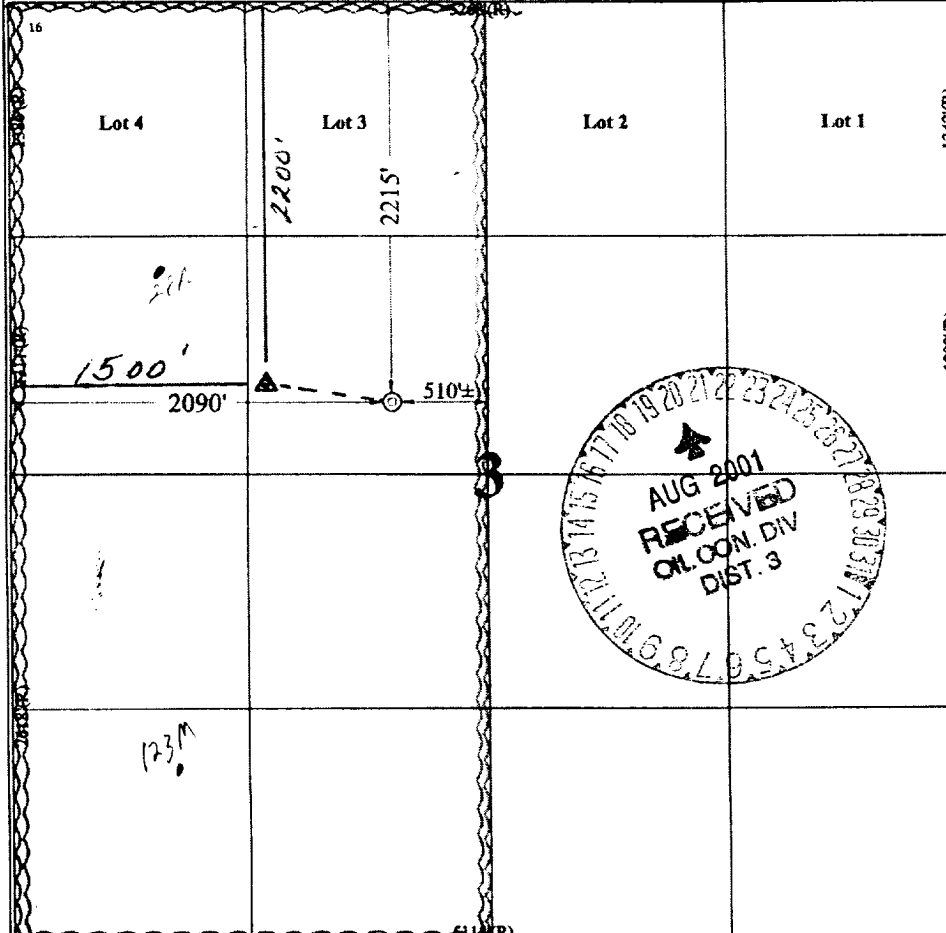
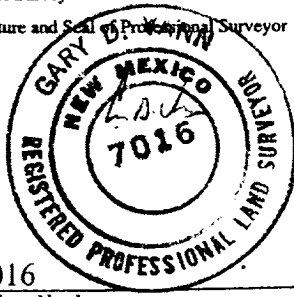
UL or Lot No. F	Section 3	Township 29 N	Range 8 W	Lot Idn	Feet from the 2215	North/South line NORTH	Feet from the 2090	East/West line WEST	County SAN JUAN
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. F	Section 3	Township 29 N	Range 8 W	Lot Idn	Feet from the 2200	North/South line NORTH	Feet from the 1500	East/West line WEST	County SAN JUAN
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¹² Dedicated Acres 324.16	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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. <i>Mary Cooley</i> Signature MARY COOLEY Printed Name Regulatory Analyst Title 07.24.2001 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. April 10, 2001 Date of Survey Signature and Seal of Professional Surveyor  7016 Certificate Number
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(R) - BLM Record

**J.MOCO
PRODUCTION COMPANY**

Florence T # 123M
NW¼ Section 3,
T29N, R8W, N.M.P.M.
750' New Hill Road Construction
T29N, R8W, Sec.3
SE¼NW¼

APD MAP # 1

**AMOCO PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM**

Prospect Name: Florance T
Lease: FLORANCE T
County: San Juan
State: New Mexico
Date: July 24, 2001

Well No: 123N
Surface Location: 3-29N-8W, 2215 FNL, 2090 FWL
Field: Blanco Mesaverde
Bottom Location: 3-29N-8W, 2200 FNL, 1500 FWL

OBJECTIVE: Drill 450' below the base of the Greenhorn Limestone, set 41/2" production casing, Stimulate LS, CH, MF, PL and DK intervals					
METHOD OF DRILLING			APPROXIMATE DEPTHS OF GEOLOGICAL MARKER		
TYPE OF TOOLS		DEPTH OF DRILLING	Estimated GL: 6171		Estimated KB: 6185
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 1/2" cement top			
REMARKS: - Please report any flares (magnitude & duration).			MARKER		SUBSEA
			Ojo Alamo		4410
			Fruitland Coal		3652
			Pictured Cliffs		3324
			Lewis Shale		3204
			Cliff House		1579
			Menefee Shale		1482
			Point Lookout		1114
			Mancos		441
			Greenhorn		
Bentonite Marker					
Two Wells		#			
Dakota MB		#			
Burro Canyon		*			
Morrison		*			
TOTAL DEPTH			391	5850	
			# Probable completion interval * Possible Pay		
SPECIAL TESTS			DRILL CUTTING SAMPLES		DRILLING TIME
TYPE			FREQUENCY	DEPTH	FREQUENCY DEPTH
None			10 feet	Production hole	Geolograph 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 - 3136 (1)	Water/LSND	8.6-9.2		<6	
3136 - 5850	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	3136	7"	J/K-55 ST&C	20#	8.75"	1,2 —
Production Liner	5850	4 1/2"	J-55	11.6#	6.25"	3 —
REMARKS: (1) Circulate Cement to Surface (2) Set casing 100' into Lewis Shale (3) Liner will overlap 100' of the 7" casing						

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: HGJ/MNP	APPROVED:
DATE: 13 July 2001 Version 4.0	
Form 46 12-00 MNP	

Cementing Program

Well Name: Florance T 123N Location: 3-29N-8W, 2215 FNL, 2090 FEL County: San Juan State: New Mexico	Field: Blanco Mesaverde / Basin Dakota API No. Well Flac Formation: Dakota MesaVerde KB Elev (est) 6185 GL Elev. (est) 6171
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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	3136	8.75	7	LT&C	Surface	NA	
Production -	5850	6.25	4.5	?	3036	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 Fluid Loss <15
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	

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 rigless.

Surface:

Preflush	20 bbl.	FreshWater	
Slurry 1	108 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		100 % excess

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/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

Cementing Program

4 Centralizers
1 Stop Ring
1 Thread Lock Compound

Intermediate:

Fresh Water	20 bbl	fresh water	
Lead		239 sx Class "G" Cement	694 cuft
Slurry 1		+ 3% D79 extender	
TOC@Surface		+ 2% S1 Calcium Chloride	
		+ 1/4 #/sk. Cellophane Flake	
		+ 0.1% D46 antifoam	
Tail		107 sx 50/50 Class "G"/Poz	135 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)	80 % excess

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", 8R, ST&C

1 Float Shoe (autofill with minimal LCM in mud)
1 Float Collar (autofill with minimal LCM in mud)
1 Stop Ring
2 Fluidmaster vane centralizers @ base of Ojo
18 Centralizers one every 4th joint to base of surface casing
1 Top Rubber Plug
1 Thread Lock Compound

Production:

Fresh Water	10 bbl	CW100	
Lead		143 LiteCrete D961 / D124 / D154	306 cuft
Slurry 1		+ 0.03 gps D47 antifoam	
TOC@Surface		+ 0.5% D112 fluid loss	
		+ 0.11% D65 TIC	
Tail		0 sx 50/50 Class "G"/Poz	0 cuft
Slurry 2		+ 5% D20 gel (extender)	+ 5 #/sk D24 gilsonite
0 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
			10 % excess
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: 4-1/2", 8R, ST&C

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

1 Top Rubber Plug
1 Thread Lock Compound

Proposed Well Profile

Report Date: July 16, 2001	Survey / DLS Computation Method: Minimum Curvature / Lubinski
Client: BP	Vertical Section Azimuth: 271.500°
Field: NM, San Juan County	Vertical Section Origin: N 0.000 ft, E 0.000 ft
Structure / Slot: BP S3-T29N-R8W / Florance T #123N	TVD Reference Datum:
Well: Florance T #123N	TVD Reference Elevation: 6185.0 ft relative to
Borehole: Borehole	Sea Bed / Ground Level Elevation: 0.000 ft relative to
UWI / API#:	Magnetic Declination: 11.292°
Survey Name / Date: Florance T #123 R2 16Jul01 / July 16, 2001	Total Field Strength: 51432.079 nT
Tort / AHD / DDI / ERD ratio: 23.999° / 590.21 ft / 4.156 / 0.101	Magnetic Dip: 63.381°
Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet	Declination Date: June 28, 2001
Location Lat / Long: N 36 31 0.000, W 108 23 0.001	Magnetic Declination Model: BGGM 2000
Location Grid N/E Y/X: N 2007835.000 ftUS, E 2561475.600 ftUS	North Reference: Grid North
Grid Convergence Angle: -0.32728780°	Total Corr Mag North -> Grid North: +11.619°
Grid Scale Factor: 0.99994655	Local Coordinates Referenced To: Well Head

Station ID	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VSec (ft)	N-S (ft)	E-W (ft)	Closure (ft)	at Azim (°)	DLS (°/100ft)	TF (°)
Surface	0.00	0.00	271.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-88.5MTF
Surface Casing Point	200.00	0.00	271.5	200.00	0.00	0.00	0.00	0.00	0.00	0.00	-88.5MTF
KOP	252.00	0.00	271.5	252.00	0.00	0.00	0.00	0.00	0.00	0.00	-88.5MTF
	300.00	1.44	271.5	299.99	0.60	0.02	-0.60	0.60	271.46	3.00	-88.5MTF
	400.00	4.44	271.5	399.85	5.73	0.15	-5.73	5.73	271.46	3.00	-88.5MTF
	500.00	7.44	271.5	499.30	16.08	0.41	-16.07	16.08	271.46	3.00	0.0
	600.00	10.44	271.5	598.08	31.62	0.80	-31.61	31.62	271.46	3.00	0.0
Begin Tangent	652.00	12.00	271.5	649.08	41.73	1.06	-41.72	41.74	271.46	3.00	0.0
Ojo Alamo 1744 TVD	1771.38	12.00	271.5	1744.00	274.47	6.98	-274.38	274.47	271.46	0.00	0.0
Fruitland Coal 2533 TVD	2578.01	12.00	271.5	2533.00	442.17	11.24	-442.03	442.17	271.46	0.00	0.0
Picture Cliffs 2861 TVD	2913.33	12.00	271.5	2861.00	511.89	13.01	-511.73	511.89	271.46	0.00	0.0
Lewis 2981 TVD	3036.01	12.00	271.5	2981.00	537.40	13.66	-537.23	537.40	271.46	0.00	0.0
Casing Point	3138.25	12.00	271.5	3081.00	558.65	14.20	-558.47	558.66	271.46	0.00	0.0
Begin Drop	3139.27	12.00	271.5	3082.00	558.87	14.20	-558.69	558.87	271.46	0.00	180.0
	3200.00	9.57	271.5	3141.65	570.23	14.49	-570.05	570.23	271.46	4.00	180.0
	3300.00	5.57	271.5	3240.76	583.40	14.83	-583.22	583.40	271.46	4.00	180.0
	3400.00	1.57	271.5	3340.55	589.63	14.99	-589.44	589.63	271.46	4.00	-88.6MTF
Vertical in Target Center	3439.25	0.00	271.4	3379.79	590.17	15.00	-589.98	590.17	271.46	4.00	-88.6MTF
Cliffhouse 4606 TVD	4665.46	0.00	271.4	4606.00	590.19	15.00	-590.00	590.19	271.46	0.00	-88.6MTF
Menefee 4703 TVD	4762.46	0.00	271.4	4703.00	590.19	15.00	-590.00	590.19	271.46	0.00	-88.6MTF
Pt. Lookout 5071 TVD	5130.46	0.00	271.4	5071.00	590.20	15.00	-590.01	590.20	271.46	0.00	-88.6MTF
Mancos 5744 TVD	5803.46	0.00	271.4	5744.00	590.21	15.00	-590.02	590.21	271.46	0.00	-88.6MTF
TD / PBHL 5850 TVD	5909.46	0.00	271.4	5850.00	590.21	15.00	-590.02	590.21	271.46	0.00	

Schlumberger

BP

WELL Florance T #123N	FIELD NM, San Juan County	STRUCTURE BP S3-T29N-R8W
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