

DISTRICT I

P.O. Box 1980, Hobbs, NM 88241 1980

DISTRICT II

811 South First St. Artesia NM 88210 2835

DISTRICT III

1000 Rio Brazos Rd. Aztec, NM 87410 1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429Form C-107-A
New 3-12-96

- APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☐ YES ☒ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Conoco Inc.

10 Desta Dr. Ste 100W, Midland, Tx. 79705-4500

Operator

Address

Ludwick LS

#21M

Section 31, T-30-N, R-10-W, C

San Juan

Lease

Well No

Unit Ltr Sec Twp Rge

County

OGRID NO. 005073

Property Code

API NO.

Spacing Unit Lease Types: (check 1 or more)

Federal ☒ , State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Blanco Mesaverde 72319		Basin Dakota 71599
2. TOP and Bottom of Pay Section (Perforations)	4400-5000'		6865-6965'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Expected Flowing		Expected Flowing
5. Bottomhole Pressure	a (Current)	a.	a.
Oil Zones - Artificial Lift: Estimated Current	609		768
Gas & Oil - Flowing: Measured Current	b (Original)		b.
All Gas Zones: Estimated Or Measured Original	1229		2493
6. Oil Gravity (*API) or Gas BT Content	1200est		1200est
7. Producing or Shut-In?			
Production Marginal? (yes or no)	No		Yes
• If Shut-In give date and oil/gas/ water rates of last production	Date Rates	Date Rates	Date Rates
Note For new zones with no production history applicant shall be required to attach production estimates and supporting data			
• If Producing, date and oil/gas/ water rates of recent test	Date Rates	Date Rates	Date Rates
	To be supplied upon Completion		To be supplied upon Completion

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MAR 30 1998
OIL CON. DIV.
DIST. 3

DISTRICT I
P.O. Box 1986, Hobbs, NM 88241 1980

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811 South First St. Artesia NM 88210 2835

DISTRICT III
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Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

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APPROVAL PROCESS:
☒ Administrative ☐ Hearing
EXISTING WELLBORE
☐ YES ☒ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Conoco Inc. Address 10 Desta Dr. Ste 100W, Midland, Tx. 79705-4500

Lease Ludwick LS Well No #21M Unit Ltr Sec Twp Rge Section 31, T-30-N, R-10-W, C County San Juan

OGRID NO. 005073 Property Code _____ API NO. _____ Spacing Unit Lease Types: (check 1 or more)
Federal ☒ , State ☐ (and/or) Fee ☐

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Gas & Oil - Flowing: Measured Current	b. (Original)		b.
All Gas Zones: Estimated Or Measured Original	1229		2493
6. Oil Gravity (°API) or Gas BT Content	1200est		1200est
7. Producing or Shut-In?	No		Yes
Production Marginal? (yes or no)	No		Yes
• If Shut-In give date and oil/gas/water rates of last production	Date Rates	Date Rates	Date Rates
Note For new zones with no production history applicant shall be required to attach production estimates and supporting data			
• If Producing, date and oil/gas/water rates of recent test (within 60 days)	Date Rates To be supplied upon Completion	Date Rates To be supplied upon Completion	Date Rates To be supplied upon Completion
8. Fixed Percentage Allocation Formula - % for each zone	oil: % Gas %	oil: % Gas %	oil: % Gas %

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9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☒ Yes ☐ No
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No
11. Will cross-flow occur? ☒ Yes ☐ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☒ Yes ☐ No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each others ☒ Yes ☐ No
13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)
14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No
15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). _____
16. ATTACHMENTS
- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
 - * Production curve for each zone for at least one year. (If not available, attach explanation.)
 - * For zones with no production history, estimated production rates and supporting data.
 - * Data to support allocation method or formula.
 - * Notification list of all offset operators.
 - * Notification list of working, overriding and royalty interests for uncommon interest cases.
 - * Any additional statements, data, or documents required to support commingling.

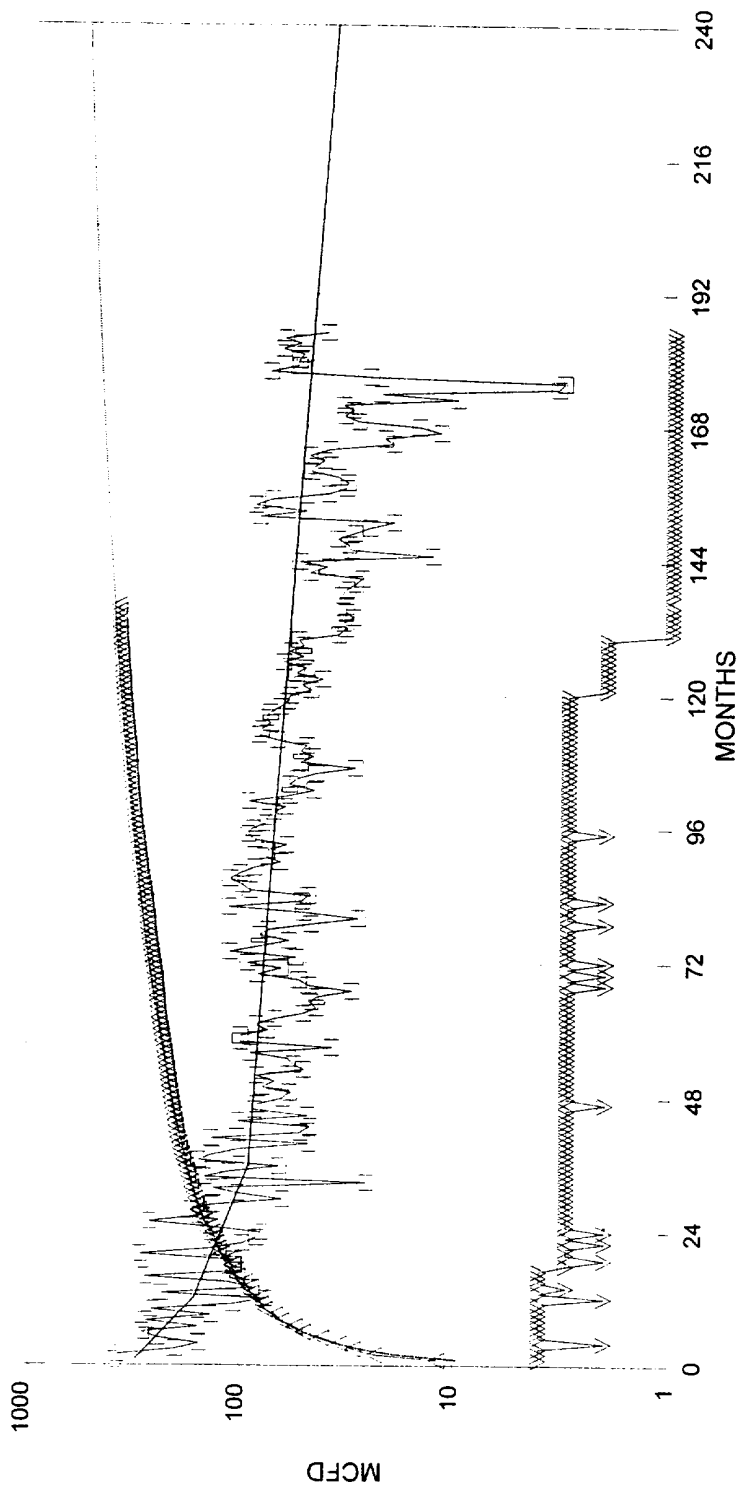
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Kay Maddox TITLE Regulatory Agent DATE 3/26/98
TYPE OR PRINT NAME Kay Maddox TELEPHONE NO. (915) 686-5798

APPLICATION FOR DOWNHOLE COMMINGLING
Ludwick LS 21M (31C 30N 10W)

As shown in the attached production plot for offsets to the Ludwick LS 21M, estimated ultimate recoveries and initial production rates from infill wells to the Dakota formation are insufficient to justify drilling stand alone wells. Furthermore, production plots from each zone indicate a similar decline profile and a fixed allocation formula can be utilized. Upon completion, both zones will be tested and stabilized flow rates will be used to allocate production from each zone. This procedure is common practice in Burlington's 29-7 Unit and reference is made to Order R-10697 as it applies to downhole commingling of marginal zones and the allocation of production between such zones.

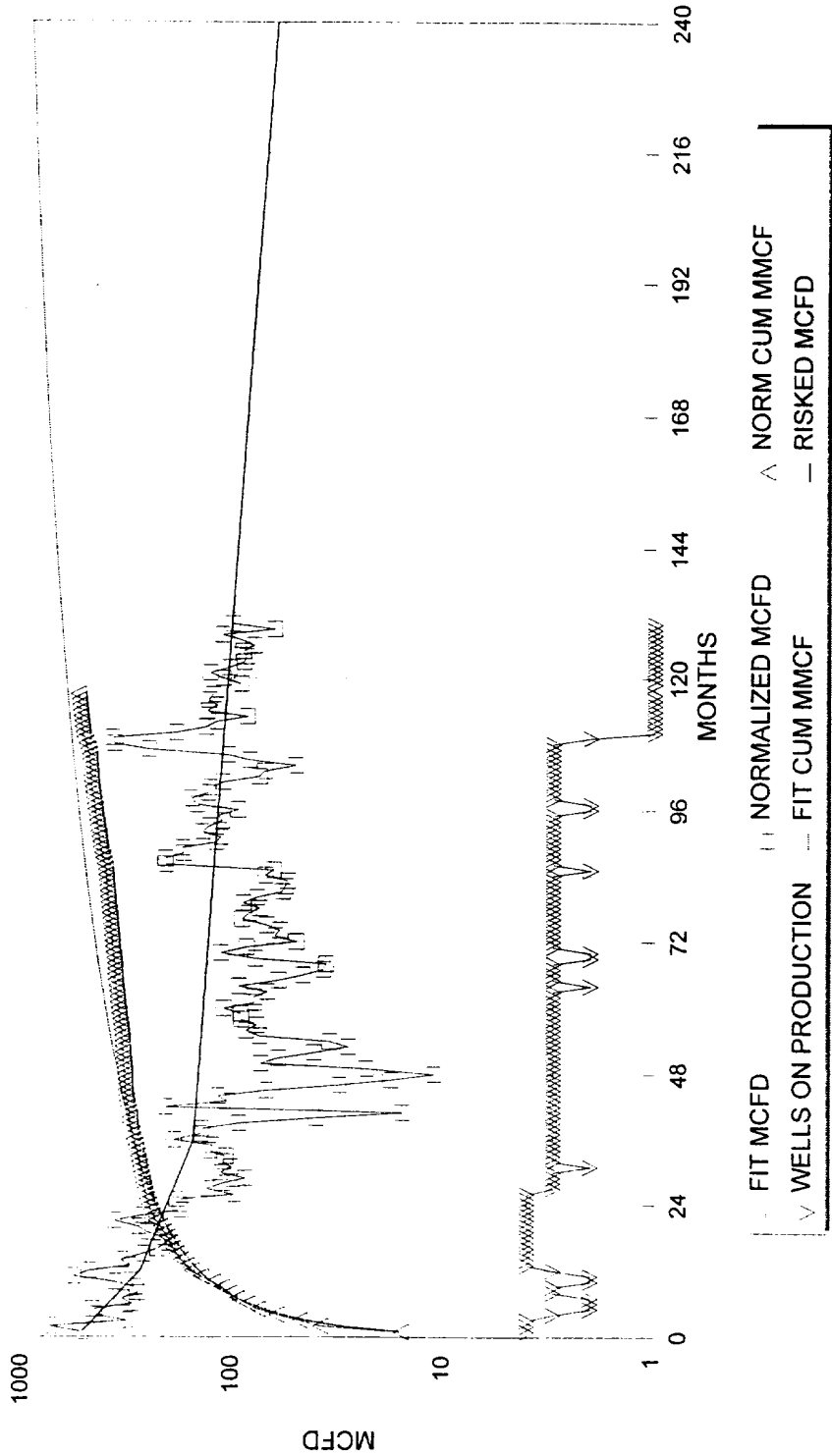
NORMALIZED DAKOTA PRODUCTION
4 WELLS SINCE 1980; OFFSET TO SECTION 36-30N-11W



FIT MCFD
 WELLS ON PRODUCTION
 FIT CUM MMCF
 NORMALIZED MCFD
 NORM CUM MMCF
 RISKED MCFD

NORMALIZED AVG:		RISKED AVG:		0% RISK	
648	MMCF EUR	648	MMCF EUR	325	MMCFD IP
555	MMCF IN 20 YRS	555	MMCF IN 20 YRS	50.0%	DECLINE, 1ST 12 MONTHS
25	MMCFD E.L.	25	MMCFD E.L.	25.0%	DECLINE, NEXT 24 MONTHS
0.0050	bbl/mcf oil yield	0.0050	bbl/mcf oil yield	5.0%	FINAL DECLINE

NORMALIZED MESAVERDE PRODUCTION
4 WELLS SINCE 1980; OFFSET TO SECTION 36-30N-11W



NORMALIZED AVG:		RISKED AVG:		0% RISK	
1220	MMCF EUR	1220	MMCF EUR	550	MMCF IP
940	MMCF IN 20 YRS	940	MMCF IN 20 YRS	50.0%	DECLINE, 1ST 12 MONTHS
25	MCFD E.L.	25	MCFD E.L.	25.0%	DECLINE, NEXT 24 MONTHS
0.0021	bbl/mcf oil yield	0.0021	bbl/mcf oil yield	5.0%	FINAL DECLINE

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, Artesia, NM 88211-0719

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

*API Number		*Pool Code	*Pool Name
		72319 / 71599	BLANCO MESAVERDE / BASIN DAKOTA
*Property Code	*Property Name		*Well Number
	LUDWICK LS		21M
*GRID No.	*Operator Name		*Elevation
005073	CONOCO, INC.		6086'

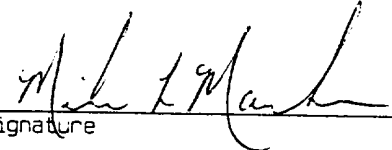
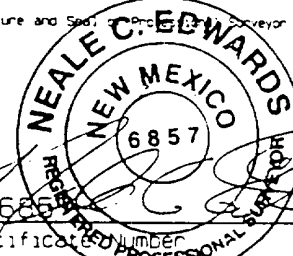
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	31	30N	10W		820	NORTH	1605	WEST	SAN JUAN

¹¹ 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
¹² Dedicated Acres					¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ 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

¹⁶ 1212.42'		1303.50'		2607.00'		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Mike L. Mankin Printed Name Right-Of-Way Agent Title 3-3-98 Date
8	820'	7		6	5	
1605'						
2618.22'						
9		10		11	12	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. FEBRUARY 23, 1998 Date of Survey Signature and Seal of Registered Professional Surveyor  Certificated Number
2607.00'						
15		15		14	13	
17		18		19	20	
1156.32'		1284.36'		2644.62'		

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO SF 078194	
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR Conoco Inc.		7. UNIT AGREEMENT NAME	
3. ADDRESS AND TELEPHONE NO 10 Desta Dr. Ste 430E, Midland, Tx. 79705-4500 915-686-5794		8. FARM OR LEASE NAME WELL NO LUDWICK LS #21M	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements *) At surface 820' FNL & 1605' FWL At proposed prod. zone 820' FNL & 1605' FWL		9. API WELL NO	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*		10. FIELD AND POOL, OR WILDCAT Blanco MV / Basin Dakota	
5. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any)		11. SEC. T., R., M., OR BLK. AND SURVEYOR AREA Sec. 31, T30N, R10W	
8. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.		12. COUNTY OR PARISH San Juan	
16. NO. OF ACRES IN LEASE		13. STATE NM	
17. NO. OF ACRES ASSIGNED TO THIS WELL 320		22. APPROX. DATE WORK WILL START* 4/15/98	
19. PROPOSED DEPTH 7392'		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc) 6086' GR			

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	K-55, 9-5/8"	36#	250'	135 sxs, circ.
8-3/4"	K-55, 7"	23#	2800'	335 sxs, circ.
6-1/4"	K-55, 4-1/2"	9.5#	7092'	470 sxs, toc @ 2600'

It is proposed to drill a vertical wellbore to the Blanco Mesaverde and Basin Dakota Pools. NOS was filed 2/21/98. The well will be drilled and equipped according to the following additional attachments:

1. Well Location & Acreage Dedication Plat (C-102).
2. Proposed Well Plan Outline.
3. Cementing Plan.
4. Blowout Preventer Hookup.
5. Surface Use Plan with Production Facility Layout.
6. Pipeline survey plat.

This application includes ROW's for the well pad, access road and pipeline.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen give data on present productive zone and proposed new 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. SIGNED Mike L. Mankin TITLE Right-of-Way Agent DATE March 3, 1998
(This space for Federal or State office use)

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 _____ TITLE _____ DATE _____

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

Conoco, Inc.
Ludwick LS #21M
Section 31, T-30-N, R-10-W, C
San Juan, New Mexico

RE: Application to Downhole Commingle (C-107A)

Notification Of Offset Operators:

Dugan Production Corp.
PO Box 420
Farmington, NM 87499-0420

Amoco
PO Box 800
Denver, CO 80201

Burlington Resources
PO Box 4239
Houston, TX 77210-4239