

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 87505-6429

Form C-107-A
New 3-12-96

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 #18M Unit Ltr Sec Twp Rge Section 6, T-29-N, R-10-W, F County San Juan

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) | 4230-4830' | | 6755-6855' |
| 3. Type of production (Oil or Gas) | Gas | | Gas |
| 4. Method of Production (Flowing or Artificial Lift) | Expected Flowing | | Expected Flowing |
| 5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original | a (Current) 606 b(Original) 1223 | <div>RECEIVED MAR 30 1998 OIL CON. DIV. DIST. 3</div> | a. 766 b. 2485 |
| 6. Oil Gravity (°API) or Gas BT Content | 1200 est | | 1200 est |
| 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 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 % |

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.

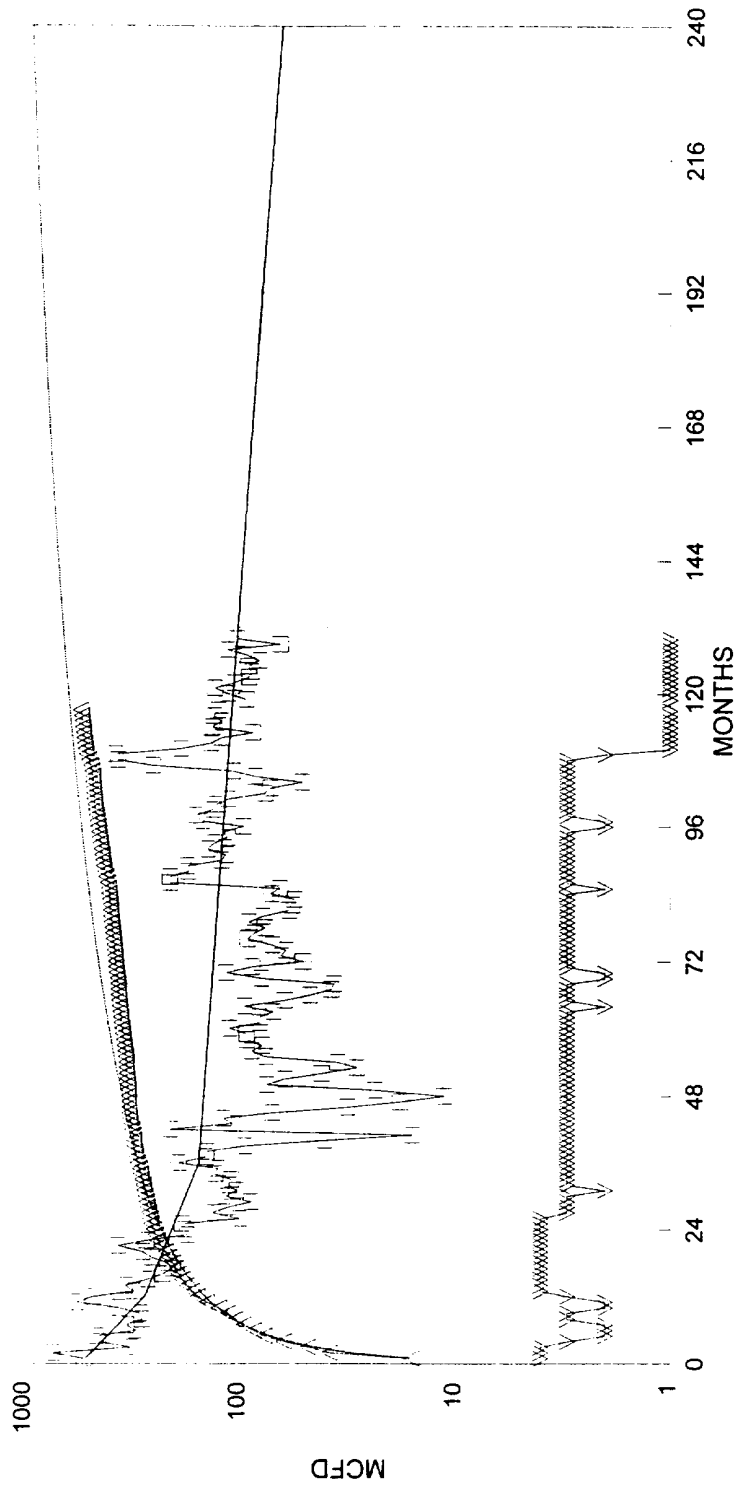
SIGNATURE Kay Maddox TITLE Regulatory Agent DATE 3/24/98

TYPE OR PRINT NAME Kay Maddox TELEPHONE NO. (915) 686-5798

APPLICATION FOR DOWNHOLE COMMINGLING
Ludwick LS 18M (6F 29N 10W)

As shown in the attached production plot for offsets to the Ludwick LS 18M, 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.

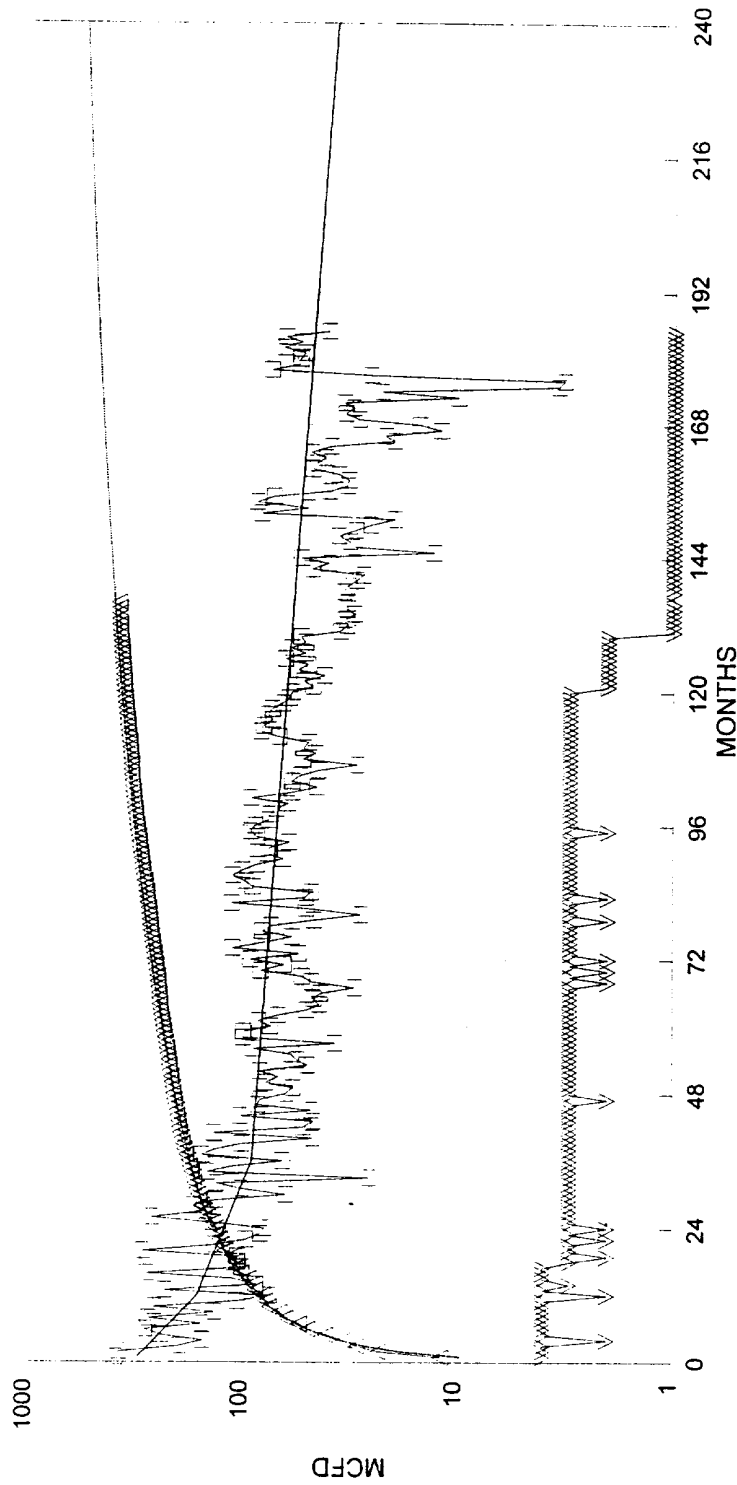
NORMALIZED MESAVERDE PRODUCTION
4 WELLS SINCE 1980; OFFSET TO SECTION 36-30N-11W



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

| | | | | |
|---------------------|--------------------------|-----------------------------|--------------------------|-------------------------------|
| NORMALIZED AVG: | 1220 MMCF EUR | 550 MCFD IP | 1220 MMCF EUR | 550 MCFD IP |
| | 940 MMCF IN 20 YRS | 50% DECLINE, 1ST 12 MONTHS | 940 MMCF IN 20 YRS | 50.0% DECLINE, 1ST 12 MONTHS |
| | 25 MCFD E.L. | 25% DECLINE, NEXT 24 MONTHS | 25 MCFD E.L. | 25.0% DECLINE, NEXT 24 MONTHS |
| | 0.0021 bbl/mcf oil yield | 5.0% FINAL DECLINE | 0.0021 bbl/mcf oil yield | 5.0% FINAL DECLINE |
| RISKED AVG: 0% RISK | | | | |

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



| | | |
|---|---|---|
| <p> WELLS ON PRODUCTION (Symbol) </p> | <p> NORMALIZED MCFD (Symbol) </p> | <p> NORM CUM MMCF (Symbol) </p> |
| <p> RISKED MCFD (Symbol) </p> | <p> RISKED CUM MMCF (Symbol) </p> | |

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

Document ID: 88211-0719
API Number: 88211-0719

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Energy Minerals & Natural Resources Division

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

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 72319 / 71599 | Pool Name BLANCO MESAVERDE / BASIN DAKOTA |
| Property Code | Property Name LUDWICK LS | Well Number 18M |
| CCPIS No 005073 | Operator Name CONOCO, INC. | Elevation 5933' |

10 Surface Location

| | | | | | | | | | |
|--------------------|--------------|-----------------|--------------|---------|-----------------------|---------------------------|-----------------------|------------------------|--------------------|
| UL or lot no. F | Section 6 | Township 29N | Range 10W | Lot Ion | Feet from the 1450 | North/South line NORTH | Feet from the 1505 | East/West line WEST | County SAN JUAN |
|--------------------|--------------|-----------------|--------------|---------|-----------------------|---------------------------|-----------------------|------------------------|--------------------|

11 Bottom Hole Location If Different From Surface

| | | | | | | | | | |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot no. | Section | Township | Range | Lot Ion | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|

| | | | |
|---------------------------|--------------------|-----------------------|--------------|
| 12 Dedicated Acres 320 | 13 Joint or Infill | 14 Consolidation Code | 15 Order No. |
|---------------------------|--------------------|-----------------------|--------------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
ON A NON STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

| | | | |
|----------|----------|----------|----------|
| 1156.32' | 1284.36' | 2644.62' | 1246.08' |
| 1296.24' | 1450' | | |
| 11 | 10 | 9 | 8 |
| 1505' | | | |
| 1295.58' | 13 | 14 | 15 |
| 1229.58' | | | |
| 2600.40' | 19 | 18 | 17 |
| 1094.94' | 20 | 21 | 22 |
| 1203.18' | | | |
| 2694.78' | | | |
| 2459.82' | | | |

17 OPERATOR CERTIFICATION

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

Mike L. Mankin

Signature

Mike L. Mankin

Printed Name

Right-Of-Way Agent

Title

2-2-98

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.

FEBRUARY 13, 1998

Date of Survey

Signature and Seal of Professional Surveyor

NEALE C. EDWARDS

NEW MEXICO

6857

6857

Certificate Number

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 | |
| a. 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 #18M | |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements *) At surface 1450' FNL & 1505' FWL At proposed prod. zone 1450' FNL & 1505' 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 drlg. unit line, if Any) | | 11. SEC, T, R, M, OR BLK. AND SURVEY OR AREA Sec. 6, T29N, 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 | | | |
| 19. PROPOSED DEPTH 7164' | | 20. ROTARY OR CABLE TOOLS Rotary | |
| 21. ELEVATIONS (Show whether DF, RT, GR, etc) 5933' GR | | 22. APPROX. DATE WORK WILL START* 4/15/98 | |

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# | 2618' | 320 sxs, circ. |
| 6-1/4" | K-55, 4-1/2" | 9.5# | 6864' | 460 sxs, toc @ 2450' |

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 #18M
Section 6, T-29-N, R-10-W, F
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

Merrion Oil & Gas Corp.
610 Reilly Ave
Farmington, NM 87401-2634

Amoco
PO Box 800
Denver, CO 80201

Burlington Resources
PO Box 4239
Houston, TX 77210-4239