

ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
- Engineering Bureau -

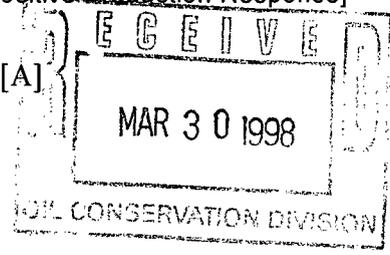
1914

**ADMINISTRATIVE APPLICATION COVERSHEET**

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
- [DD-Directional Drilling] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]



[1] **TYPE OF APPLICATION - Check Those Which Apply for [A]**

- [A] Location - Spacing Unit - Directional Drilling  
 NSL    NSP    DD    SD

Check One Only for [B] and [C]

- [B] Commingling - Storage - Measurement  
 DHC    CTB    PLC    PC    OLS    OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX    PMX    SWD    IPI    EOR    PPR

[2] **NOTIFICATION REQUIRED TO: - Check Those Which Apply, or  Does Not Apply**

- [A]  Working, Royalty or Overriding Royalty Interest Owners
- [B]  Offset Operators, Leaseholders or Surface Owner
- [C]  Application is One Which Requires Published Legal Notice
- [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F]  Waivers are Attached

[3] **INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding**

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Kay Maddox                      Kay Maddox                      Regulatory Agent                      3/26/98  
 Print or Type Name                      Signature                      Title                      Date

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

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

DISTRICT II  
811 South First St. Artesia NM 88210 2835

OIL CONSERVATION DIVISION

APPROVAL PROCESS:  
 Administrative  Hearing

DISTRICT III  
1000 Rio Brazos Rd. Aztec, NM 87410 1693

2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429

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 #19M Unit Ltr Sec Twp Rge Section 5, 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)	4165-4765'		6695-6795'
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: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a (Current) 605	a.	a. 764
	b(Original) 1221	b.	b. 2481
6. Oil Gravity (°API) or Gas BT Content	1200 est		1200 est
7. Producing or Shut-In?	No		Yes
Production Marginal? (yes or no)  • 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	Date Rates	Date Rates
	To be supplied upon Completion	To be supplied upon Completion	To be supplied upon Completion
8. Fixed Percentage Allocation Formula -% or 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.

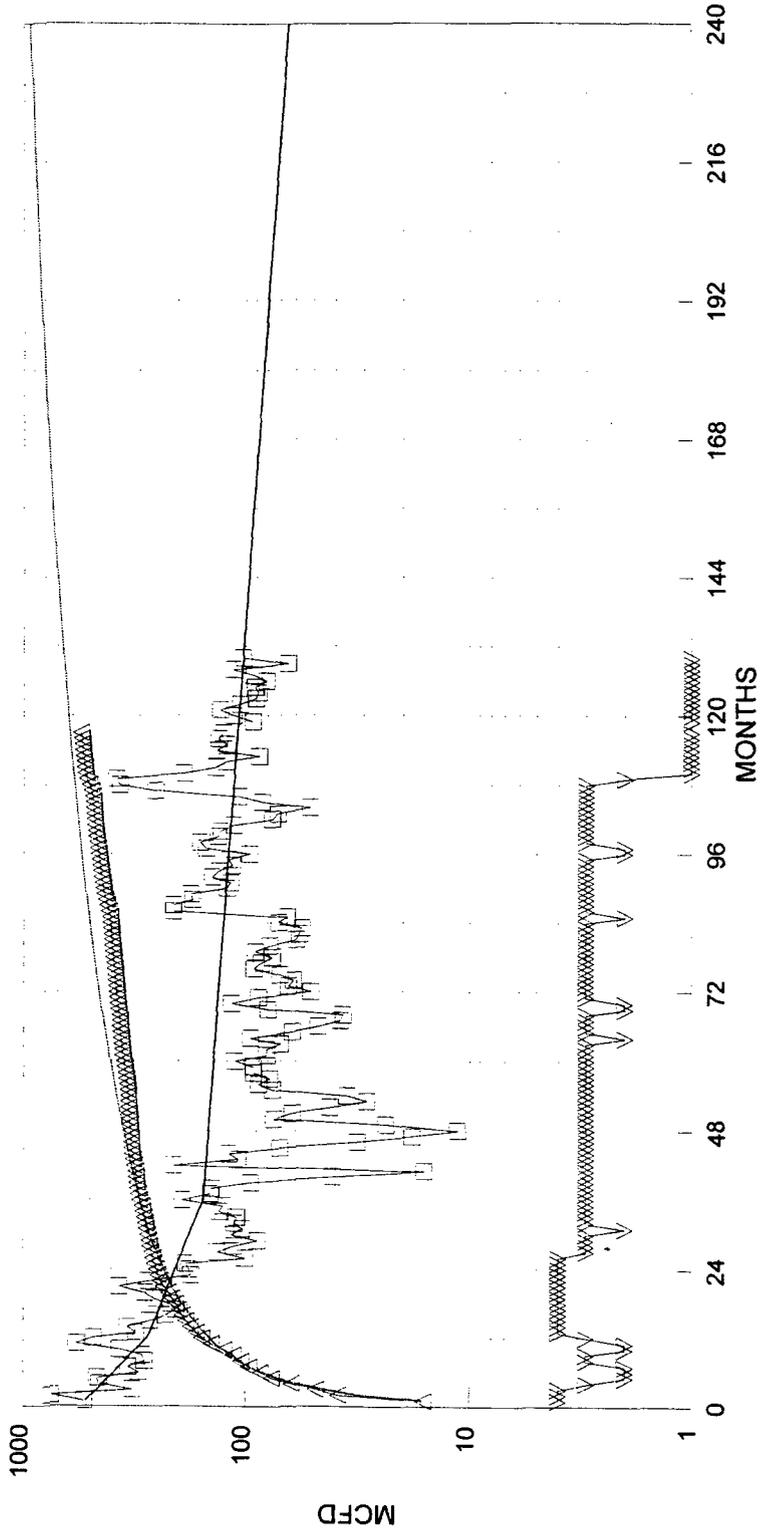
SIGNATURE Kay Maddox TITLE Regulatory Agent DATE 3/26/98

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

APPLICATION FOR DOWNHOLE COMMINGLING  
Ludwick LS 19M (5F 29N 10W)

As shown in the attached production plot for offsets to the Ludwick LS 19M, 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.

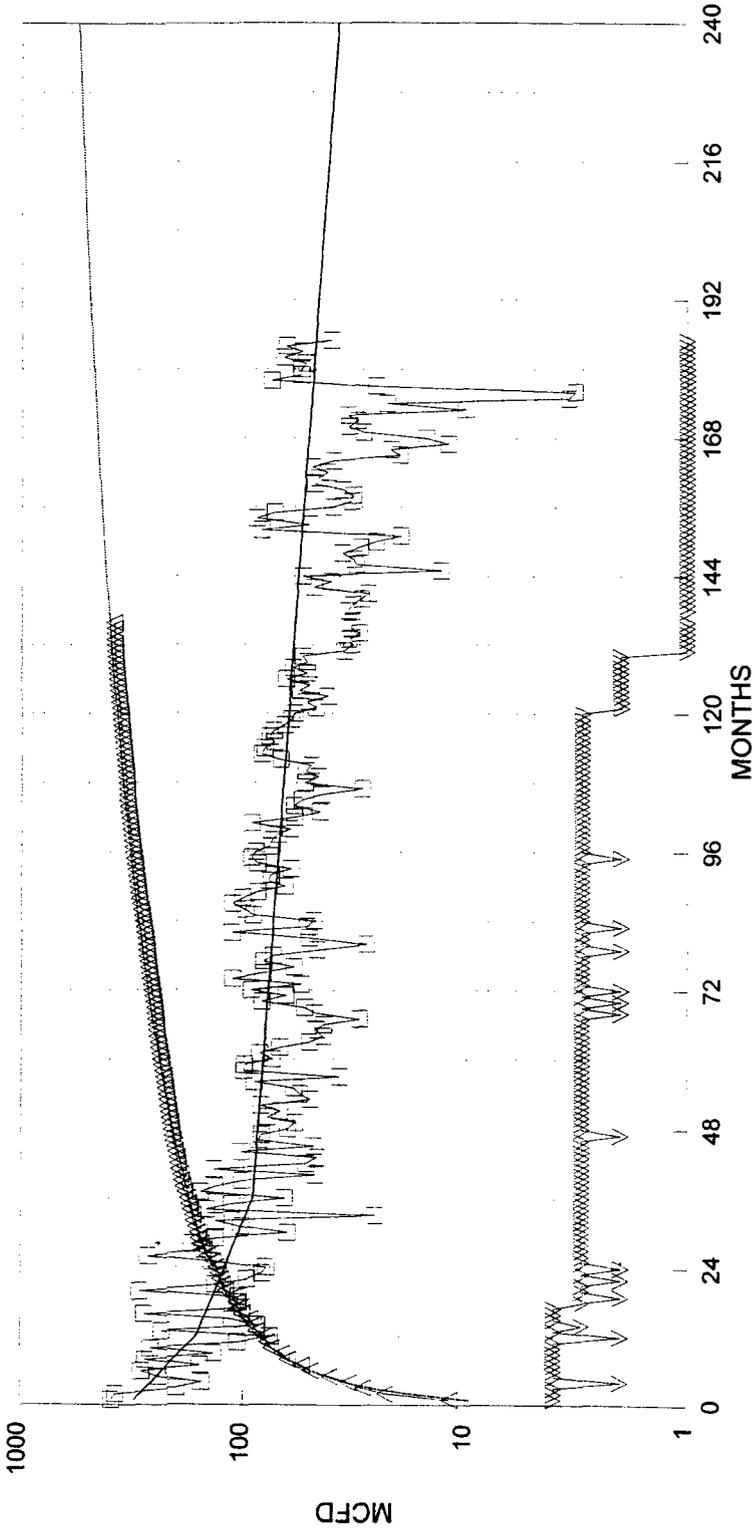
**NORMALIZED MESAVERDE PRODUCTION**  
**4 WELLS SINCE 1980; OFFSET TO SECTION 36-30N-11W**



— FIT MCFD    ▽ NORMALIZED MCFD    ▲ NORM CUM MMCF  
 - - - WELLS ON PRODUCTION    - - - FIT CUM MMCF    - - - RISKED MCFD

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

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



▽ FIT MCFD    ||| NORMALIZED MCFD    ▲ NORM CUM MMCF  
 ▽ WELLS ON PRODUCTION    --- FIT CUM MMCF    --- RISKED MCFD

<b>NORMALIZED AVG:</b> 648 MMCF EUR 555 MMCF IN 20 YRS 25 MCFD E.L. 0.0050 bbl/mcf oil yield	<b>RISKED AVG:</b> 325 MCFD IP 50% DECLINE, 1ST 12 MONTHS 25% DECLINE, NEXT 24 MONTHS 5.0% FINAL DECLINE	<b>0% RISK</b> 648 MMCF EUR 555 MMCF IN 20 YRS 25 MCFD E.L. 0.0050 bbl/mcf oil yield	325 MCFD IP 50.0% DECLINE, 1ST 12 MONTHS 25.0% DECLINE, NEXT 24 MONTHS 5.0% FINAL DECLINE
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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

Form O-102  
 Revised February 21, 1994  
 Instructions on back  
 Submit to Appropriate District Office  
 State Lease - 4 Copies  
 Fee Lease - 3 Copies

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

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		19M
*GRID No.	*Operator Name		*Elevation
005073	CONOCO, INC.		5847'

<sup>10</sup> Surface Location

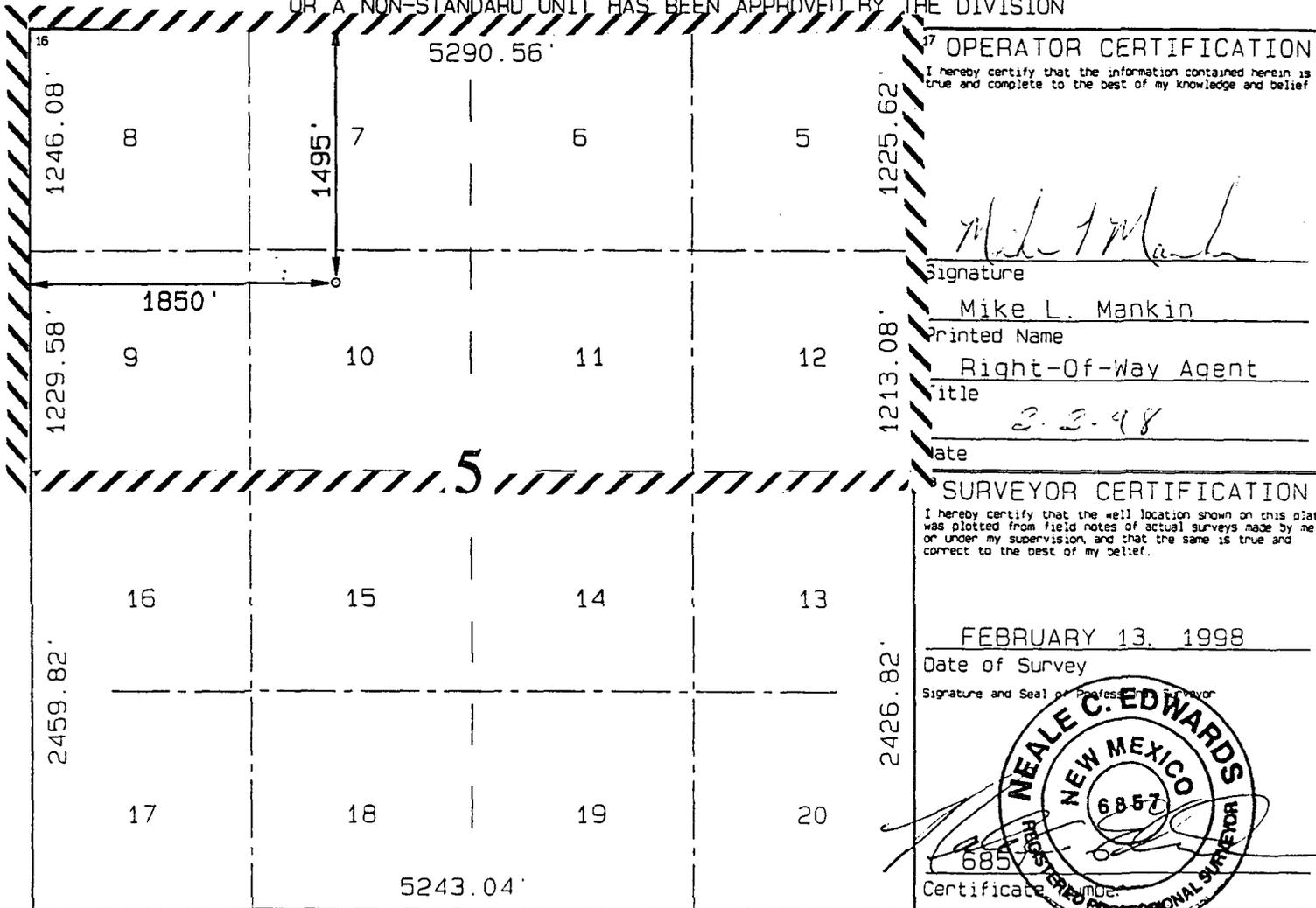
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	5	29N	10W		1495	NORTH	1850	WEST	SAN JUAN

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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



**<sup>17</sup> 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

2-3-98  
 Date

**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

*Neale C. Edwards*  
 Signature and Seal of Professional Surveyor

NEALE C. EDWARDS  
 NEW MEXICO  
 6857  
 REGISTERED PROFESSIONAL SURVEYOR

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 _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <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 #19M
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements *) At surface 1495' FNL & 1850' FWL At proposed prod. zone 1495' FNL & 1850' 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. 5, T29N, R10W
16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL 320	12. COUNTY OR PARISH San Juan
8. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	19. PROPOSED DEPTH 7148'	13. STATE NM
20. ROTARY OR CABLE TOOLS Rotary		22. APPROX. DATE WORK WILL START* 4/15/98
21. ELEVATIONS (Show whether DF, RT, GR, etc ) 5847' 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#	2565'	315 sxs, circ.
6-1/4"	K-55, 4-1/2"	9.5#	6848'	470 sxs, toc @ 2400'

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**

Conoco, Inc.  
Ludwick LS #19M  
Section 5, 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