

DISTRICT 3
Oil and Gas Division

State of New Mexico
Energy, Minerals and Natural Resources Department

Form O-27-A
New 1-12-90

SERIAL 1-1

Oil and Gas Division, 1000 N. 10th St., P.O. Box 1000

DISTRICT 1-1

Oil and Gas Division, 1000 N. 10th St., P.O. Box 1000

OIL CONSERVATION DIVISION

2640 S. Pacific
Santa Fe, New Mexico 87505-6429

APPROVAL PROCESS

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Conoco Inc.

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

Address

Lodewick

4E

Section 18, T-27-N, R-9-W, A

San Juan
County

Wellbore No. 005073

Property Code

Well No.

30-045-255-0

Spacing Unit Lease Types (check for more)

Federal ☒ State ☐ Landmark Fee ☐

The following facts are submitted in support of downhole commingling	Upper Zone	Intermediate Zone	Lower Zone
1. Field Name and Pool Number	Basin Fracture Coal 71629		Basin Dakota 71599
2. Top and bottom of pay section (Perforations)	2314-2423		6830-6994'
3. Type of production (Oil or Gas)	Gas (Expected)		Gas
4. Method of production (Flowing or artificial lift)	Expected Flowing		Flowing
5. Bottomhole Pressure	a. Currently 450 PSI		660
Oil Zones - Estimated Current Gas & Oil Flowing	Estimated Current		
Oil Zones - Measured Current	Original		
Oil Zones - Estimated Measured Current	790		2320
6. GOR (gravity separation) ratio of oil and gas	1190		1180
7. Production or shut-in?	To Be Completed		Producing
Production Margin (yes or no)	Yes (Expected)		Yes
8. If shut-in, give date and oil/gas/water rates of last production	Date: 1-8-98 Rates: 200 MCFD, 0 BOD, 0 BW	Date: 1-8-98 Rates: 51 MCFD, 1 BOD, 1 BW	Date: 1-8-98 Rates: 51 MCFD, 1 BOD, 1 BW
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	Prod Allocation by Subtraction See Table		
10. If not, have all working, overriding, and royalty interests been notified by certified mail? Have all other operators been given written notice of the proposed downhole commingling?			
11. Will cross flow occur? 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?			
12. Are all produced fluids from all commingled zones compatible with each others?			
13. Will the value of production be decreased by commingling?			
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.			
15. NMCD Reference Cases for Rule 303(D) Exceptions			
16. ATTACHMENTS			

RECEIVED
AUG 31 1998
OIL CON. DIV.
DIST. 3

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 other 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. NMCD 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 other 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

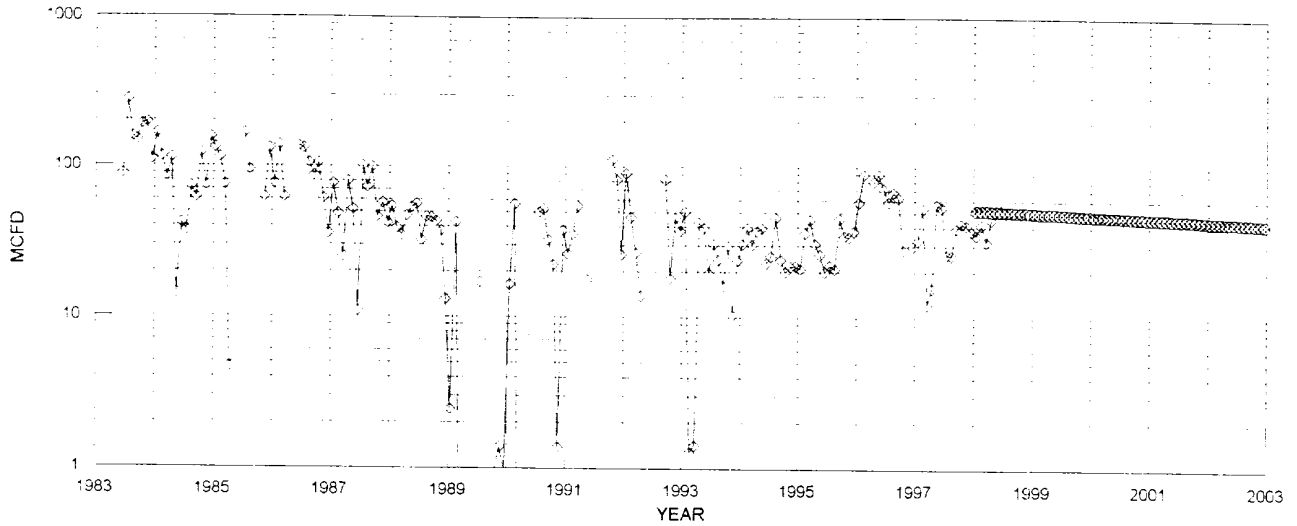
Regulatory Agent DATE Aug. 27, '98

TYPE OR PRINT NAME

KAY MADDOX

TELEPHONE NO. (915) 686-6548

LODEWICK #4E DAKOTA PRODUCTION
SECTION 18A-27N-09W

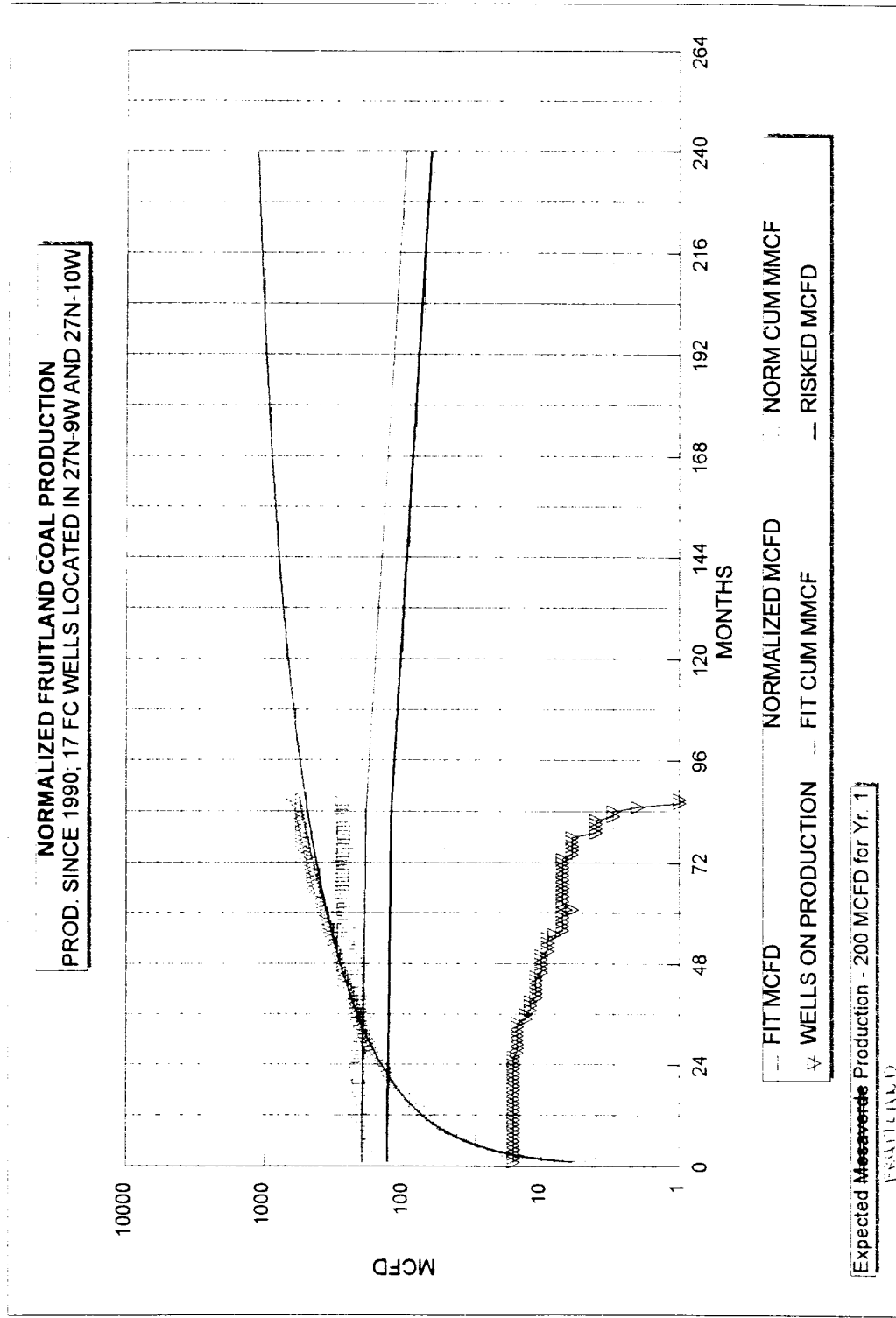


+ DAKOTA MCFD x FIT MCFD

DAKOTA HISTORICAL DATA		1ST PROD: 5/83	DAKOTA PROJECTED DATA	
OIL CUM:	2.4 MBO		1/1/98 Qi:	52 MCFD
GAS CUM:	263.5 MMCF		DECLINE RATE:	4.00% (EXPONENTIAL)
OIL YIELD:	0.0090 BBL/MCF		OIL YIELD:	0.0062 BBL/MCF, LAST 3 YEARS

YEAR	MID-YEAR AVG MCFD	MID-YEAR AVG BOPD
1998	51	0.32
1999	49	0.30
2000	47	0.29
2001	45	0.28
2002	43	0.27
2003	41	0.26
2004	40	0.25
2005	38	0.24
2006	37	0.23
2007	35	0.22
2008	34	0.21
2009	32	0.20
2010	31	0.19
2011	30	0.19
2012	29	0.18
2013	28	0.17
2014	26	0.16
2015	25	0.16
2016	24	0.15
2017	23	0.15
2018	22	0.14
2019	22	0.13
2020	21	0.13
2021	20	0.12
2022	19	0.12
2023	18	0.11
2024	18	0.11
2025	17	0.10
2026	16	0.10
2027	16	0.10

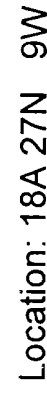
PRODUCTION FORECAST FOR SUBTRACTION METHOD COMMINGLE ALLOCATION



NORMALIZED AVG:		RISKED AVG:	
1749 MMCF EUR	200 MCFD IP	1132 MMCF EUR	140 MCFD IP
1142 MMCF IN 20 YRS	1% DECLINE, 1ST 12 MONTHS	755 MMCF IN 20 YRS	1.0% DECLINE, 1ST 12 MONTHS
10 MCFD E.L.	1% DECLINE, NEXT 72 MONTHS	10 MCFD E.L.	1.0% DECLINE, NEXT 72 MONTHS
0.0000 bbl/mcf oil yield	5% FINAL DECLINE	0.0000 bbl/mcf oil yield	5.0% FINAL DECLINE

Dwights
Ret
08/14/98

Retrieval Code: 251,045,27N09W18A00DK
08/14/98



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

District II
PO Drawer DD, 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 30-045-25550	2 Pool Code 71629	3 Pool Name Basin Fruitland Coal
4 Property Code	5 Property Name Lodewick	6 Well Number # 4E
7 OGRID No 005073	8 Operator Name Conoco Inc., 10 Desta Drive, Ste. 100W, Midland, TX 79705-4500	9 Elevation 6501'

10 Surface Location

UL or lot no A	Section 18	Township 27N	Range 9W	Lot Idn	Feet from the 1040'	North/South line North	Feet from the 845'	East/West line East	County San Juan
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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
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12 Dedicated Acres 320	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.	
	Signature <i>Kay Maddox</i> Kay Maddox	
	Printed Name Regulatory Agent	
	Title August 12, 1998	
	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.	
	Date of Survey	
	Signature and Seal of Professional Surveyor	
	Certificate Number	

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-107
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

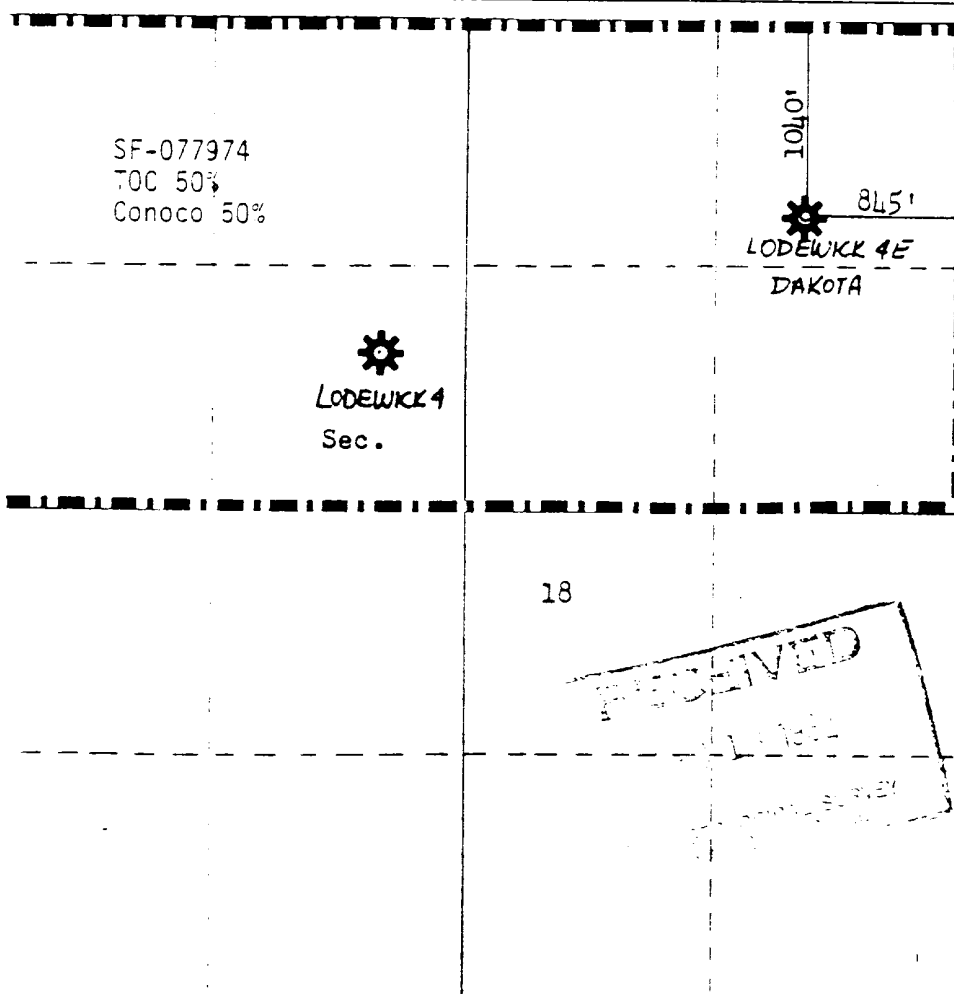
Operator TENNECO OIL COMPANY			Lease LODEWICK		Well No. 11E
Section Letter	Section	Township	Range	County	
	18	27N	9W	San Juan	
Actual Footage Location of Well:					
040	feet from the	North	line and	845	feet from the East line
Ground Level Elev. 501	Producing Formation Dakota		Pool Basin Dakota		Dedicated Acreage: 320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name
Ken Russell
Position
Sr. Production Analyst
Company
Tenneco Oil Company
Date
November 19, 1982

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.

ADMIN 026116

Date Surveyed
September 1, 1982
Registered Professional Engineer and Land Surveyor
Fred B. Kerr Jr.
Certificate No. **1000**

ENGINEER

Scale: 1"=1000'

--QUICK BHP--

Calculate BHP and Z-factor from surface shut-in pressure

CURRENT PRESSURES

08/14/98

WELL NAME :	Lodewick 4E Dakota Current Pressure		
GAS GRAVITY:	0.66	% N2	0.20
CONDENSATE (YES=1):	0	% CO2	0.20 %
RESERVOIR TEMP:	176 °F	% H2S	0.00 %
SURFACE TEMP:	60 °F	Pc =	671.09 %
DEPTH OF ZONE:	6,760 feet	Tc =	376.38

SURFACE PRES	BHP	Z	BHP/Z
psia	psia		psia
563	660	0.9379	703

NOTE: Initial ISIP avg calc BHB '50's & 60'S wells

Current ISIP avg calc BHP most recent test dates

WELL NAME :	Lodewick 4E Dakota Initial Pressure		
GAS GRAVITY:	0.66	% N2	0.20
CONDENSATE (YES=1):	0	% CO2	0.20 %
RESERVOIR TEMP:	176 °F	% H2S	0.00 %
SURFACE TEMP:	60 °F	Pc =	671.09 %
DEPTH OF ZONE:	6,760 feet	Tc =	376.38

SURFACE PRES	BHP	Z	BHP/Z
psia	psia		psia
1,924	2,317	0.8599	2,694

08/14/98

BHPCOMM.WK4

12:55 PM

Lodewick #4E
API # 30-045-25550
Section 18, T-27-N, R-9-W, A
San Juan County, NM

RE: Application to Downhole Commingle Fruitland Coal & Dakota

NOTIFICATION OF OFFSET OPERATORS:

Burlington Resources
PO Box 4289
Farmington, NM 87499

Amoco
PO Box 800
Denver, CO 80201

Universal Resources
1331 17th STE 300
Denver, CO 80202

A copy of the C-107A Downhole Commingle Application has been sent to the above listed parties.
