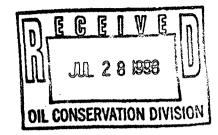
NHC

8/17/98

Mid-Continent Region Production United States

Marathon Oil Company

P.O. Box 552 Midland, TX 79702-0552 Telephone 915/682-1626



July 24, 1998

Mr. David Catanach Energy and Minerals Department Oil Conservation Division P. O. Box 2088 Santa Fe, NM 87501-2088

Re: Request for Exception to Rule 303-A Downhole Commingling Warn State A/C 2 #26 Lot 5, 2180' FNL & 400' FWL Sec. 6, T-18-S, R-35-E Atoka, Wolfcamp and Upper Penn Pools Vacuum Field Lea County, New Mexico

Dear Mr. Catanach:

Marathon Oil Company requests administrative approval for an exception to Rule 303-A to permit the downhole commingling of production in the above subject well from the Vacuum (Wolfcamp) and Vacuum (Penn) pools.

300°;

The Warn State A/C 2 #26 was recently drilled an Atoka producer. However, the Atoka was shut-in due to uneconomical production and was completed in the Penn formation. Unfortunately, the Penn production has also proved to be uneconomical. For this reason, Marathon is requesting to downhole commingle the Penn, Wolfcamp, and Atoka formations to maximize the economical production from this well.

The proposed method for allocating production from the individual intervals is as follows: Originally, the well was completed in the Atoka. A substantial amount of production data was gathered during this period and a curve was fit to the subsequent decline. The Atoka was then temporarily plugged back and the Wolfcamp was perforated and produced to obtain a similar decline curve. The result of this is that both the Atoka and Wolfcamp production rates are known quantities and therefore, when the Penn is added to the total, all one has to do is subtract the known rates from the total to obtain the incremental Penn allocation.

Rod pumping equipment will be utilized to keep the PBHP as low as possible to prevent crossflow.

Enclosed is the pertinent data supporting this application as outlined in Rule 303-A. If additional information is necessary, please advise.

Sincerely, ma

Walter J. Dueease

WJD/dit Enclosure h:\dueease\ocd\warn226

A subsidiary of USX Corporation

Marathon Oil Company Warn State A/C 2 #26 Lot 5, 2180' FNL & 400' FWL Sec. 6, T-18-S, R-35-E Atoka, Wolfcamp, and Upper Penn Pools Vacuum Field Lea County, New Mexico

Offset Operator and Address:

Texaco Exploration and Production Inc. Heritage Center P. O. Box 3109 Midland, TX 79702-3109



P.O. Box 552 Midland, TX 79702-0552 Telephone 915/682-1626

July 23, 1998

Texaco Exploration & Production Inc. P. O. Box 3109 Midland, TX 79702-3109

Re: Request for Exception to Rule 303-A Downhole Commingling Warn State A/C 2 #26 Lot 5, 2180' FNL & 400' FWL Sec. 6, T-18-S, R-35-E Atoka, Wolfcamp and Upper Penn Pools Vacuum Field Lea County, New Mexico

Ladies and/or Gentlemen:

Marathon Oil Company has filed an application with the New Mexico Oil Conservation Division to downhole commingle the above referenced well. Please find enclosed a copy of the application as outlined in Rule 303-A.

If you are in agreement and waive all objections to the downhole commingling, please sign below and mail the original to the NMOCD in the enclosed addressed envelope. Also, please return one copy to Marathon at the letterhead address.

Sincerely,

Walter J. Dueease

WJD/dll Enclosure

-, 1990.	AGREED TO AND ACCEPTED THIS	DAY OF	_, 1998.
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**TEXACO EXPLORATION & PRODUCTION** 

By: Title:

A subsidiary of USX Corporation

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

**APPROVAL PROCESS:** Administrative Hearing

**EXISTING WELLBORE** 

- No - No - No

### \_ YES NO

### APPLICATION FOR DOWNHOLE COMMINGLING

Marathon Oil Compány

Operator		Address	
Warn State A/C 2	26	Lot 5, Sec. 6, T-	18-S, R-35-E, Lea County,NM
Lease	Well No.	Unit Ltr. · Sec - Twp - Rge	County
			Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14021 **Property Code** <u>6484</u> API NO. 30-025-33541 Federal , State <u>X</u>, (and/or) Fee

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Tomic/one	
1. Pool Name and Pool Code	Vacuum - Wolfcamp 42340	Vacur Una. Penn 42320	1 acuum - Atoka	
2. Top and Bottom of Pay Section (Perforations)	9330 - 10,069	10,259 - 10,556	11,153 - 11,206	
3. Type of production (Oil or Gas)	0i1	011	011	
4. Method of Production (Flowing or Artificial Lift)	RP	RP	RP	
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current	a. <sup>(Current)</sup> 3,000 Est.	a. 4,700 RFT	a. 3,200 Est.	
Estimated Current Gas & Oil - Flowing: All Gas Zones: Estimated Or Measured Original	b. <sup>(Original)</sup> 3,375 RFT	ь. 4,700 RFT	ь. 4,180 PBU	
6. Oil Gravity ( <sup>°</sup> API) or Gas BTU Content	42°	37°	39°	
7. Producing or Shut-In?	Producing	SI	SI	
Production Marginal? (yes or no)	Yes	Yes	Yes	
<ul> <li>If Shut-In, give date and oil/gas/ water rates of last production</li> <li>Note: For new zones with no production history, applicant shall be required to attach production</li> </ul>	Date: Rates:	Date: New Rates: New	Date: 5/20/98 Rates: 30/200/90	
estimates and supporting data • If Producing, give date andoil/gas/ water rates of recent test (within 60 days)	Date: 7/20/98 Rates: 46/45/111	Date: Rates:	Date: Rates:	
<ol> <li>Fixed Percentage Allocation Formula -% for each zone</li> </ol>	Oil: G <b>as:</b> % %	Oil: Gas: % %	Oil: Gas: %	

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. 9.

10. Are all working, overriding, and royalty interests identical in all commingled zones? If not, have all working, overriding, and royalty interests been notified by certified mail? Have all offset operators been given written notice of the proposed downhole commingling? X Yes \_\_\_\_\_ X Yes \_\_\_\_

Will cross-flow occur? X Yes No If yes, are fluids compatible, will flowed production be recovered, and will the allocation formula be reliable. No If yes, are fluids compatible, will the formations not be damaged, will any cross-11. Will cross-flow occur? X Yes \_\_\_ No (If No, attach explanation)

X Yes No 12. Are all produced fluids from all commingled zones compatible with each other? 10

13. Will the value of production be decreased by commingling? Yes X 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 X No

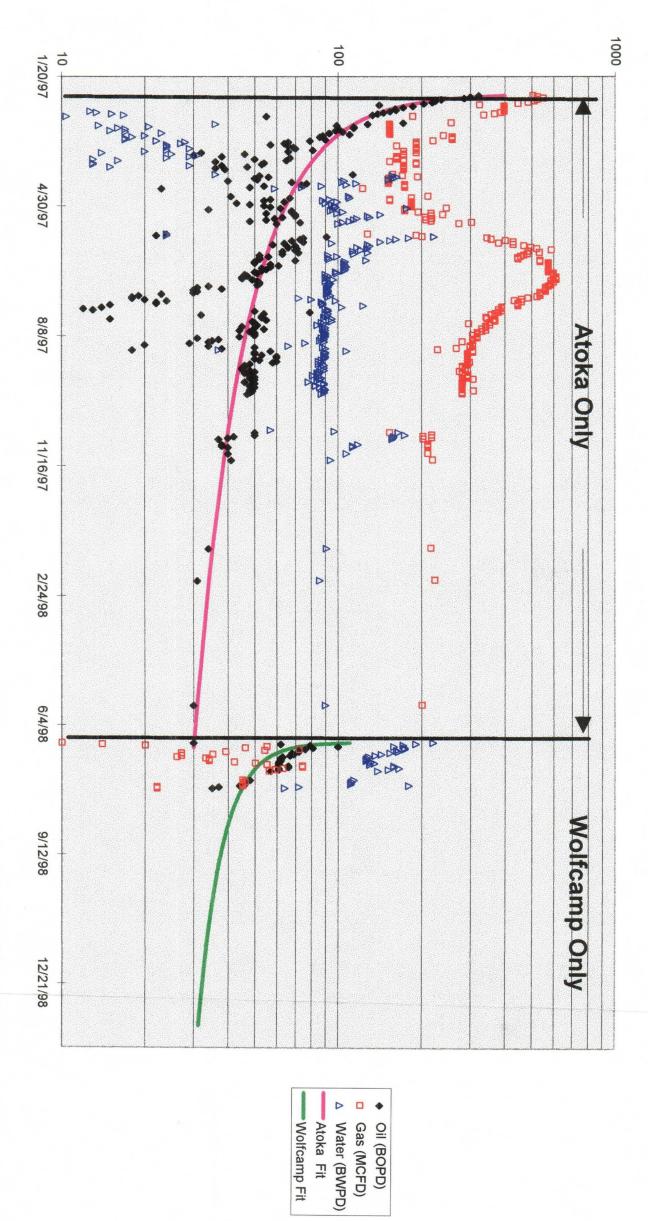
15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S).

16. ATTACHMENTS

- MENTS: 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	t the information	above is true	and complete to	the best of my	knowledge and belief
		$ \rightarrow $			•	5

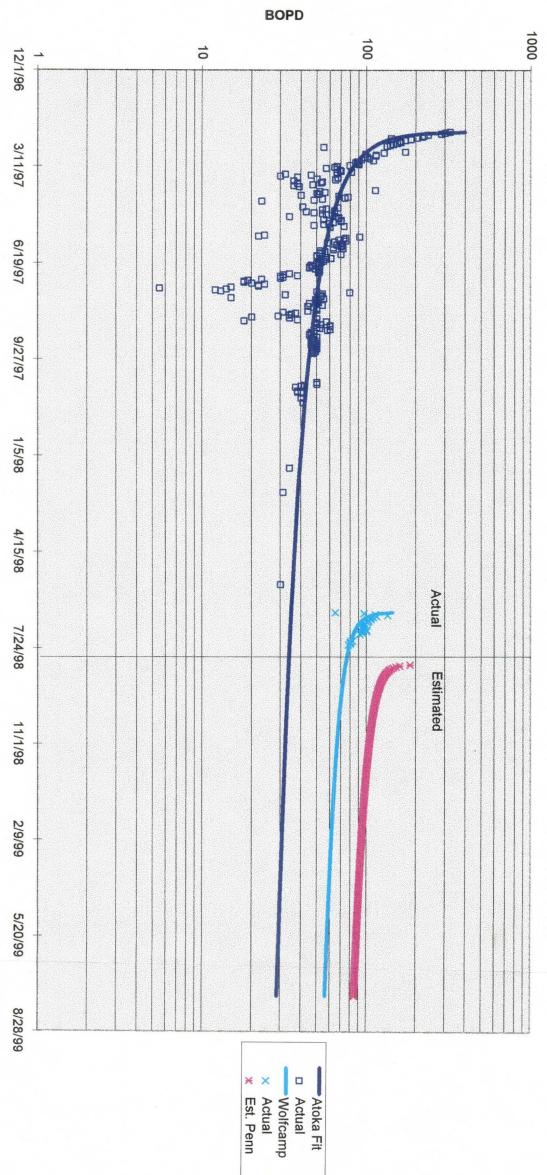
SIGNATURE Nalta - Quican	TITLE Drlg. SuperintendenDATE 7/23/98
TYPE OR PRINT NAME D. P. Nordt	TELEPHONE NO. ( 915 ) 687-8356



Atoka

Page 1

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# Warn State A/C "2" #26 Production

Chart1

# Page 1

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DISTRICT II P.O. Drawer DD, Artesia, NM 88211-0719

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

DISTRICT IV P.O. BOX 2088, SANTA FE, N.M. 87504-2088

### WELL LOCATION AND ACREAGE DEDICATION PLAT

API	Number			Pool Code		Pool Name			
30-025-33541					,	Vacuum - Atoka			
Property C	ode	Property Name						Well Number	
6484		WARN STATE ACCOUNT 2						26	
14021 <sup>0</sup>	).	Operator Name MARATHON OIL COMPANY						Elevation 3967	
					Surface Loca	ation			
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 4	6	18 S	35 E		2180	NORTH	400	WEST	LEA
			Bottom	Hole Loo	cation If Diffe	rent From Sur	face		L,

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
						•			
Dedicated Acres Joint or Infill Consolidation Code Order No.									
80 - S/2,	NW/4				•				

80 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

F	LOT 4	LOT 3	LOT 2	LOT 1	OPERATOR CERTIFICATION
					I hereby certify the the information
		1			contained herein is true and complete to the
					best of my knowledge and belief.
		, 40.00 ACRES	40.00 ACRES	40.00 ACRES	Signature
	LOT 5	40.00 ACRES	40.00 ACRES	40.00 ACRES	
			Ĭ		D.P. Nordt Printed Name
					Drilling Superintendent
		1 -	PROPATION UNIT		<b>Title</b> 7/24/98
	Ó 400'		UNIT		Date
	37 60. 40050				SURVEYOR CERTIFICATION
	LOT 6				
			N Contraction of the second se		I hereby certify that the well location shown on this plat was plotted from field notes of
			- 224 AC.		actual surveys made by me or under my supervison, and that the same is true and
	•	,	2 320 AC. LEDSE		correct to the best of my belief.
					JULY 30, 1996
	37.57 ACRES				Date Surveyed
	LOT 7	<u>+</u>			Signature & Seal of Professional Surveyor
		1		1	MEXICO 2
					100011 5 Apr 8-12-96
					96-11-09272
					Certificate. No. JOHN W. WEST 676
	37.65 ACRES	1.			CARYNEIDSON 3239 CARYNEIDSON 12641
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	State	of	New	Мех	cico (
Energy.	Minerals a	und Na	tural Res	ources	Department

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Revised February 10, 1994 Submit to Appropriate District Office State Lease - 4 Copies

### OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

□ AMENDED REPORT

Form C-102 Fee Lease - 3 Copies

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P.O. Box 552 Midland, TX 79702-0552 Telephone 915/682-1626

July 24, 1998

Mr. David Catanach Energy and Minerals Department Oil Conservation Division P. O. Box 2088 Santa Fe, NM 87501-2088

Re: Request for Exception to Rule 303-A Downhole Commingling Warn State A/C 2 #26 Lot 5, 2180' FNL & 400' FWL Sec. 6, T-18-S, R-35-E Atoka, Wolfcamp and Upper Penn Pools Vacuum Field Lea County, New Mexico

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Marathon Oil Company requests administrative approval for an exception to Rule 303-A to permit the downhole commingling of production in the above subject well from the Vacuum (Wolfcamp) and Vacuum (Penn) pools.

The Warn State A/C 2 #26 was recently drilled an Atoka producer. However, the Atoka was shut-in due to uneconomical production and was completed in the Penn formation. Unfortunately, the Penn production has also proved to be uneconomical. For this reason, Marathon is requesting to downhole commingle the Penn, Wolfcamp, and Atoka formations to maximize the economical production from this well.

The proposed method for allocating production from the individual intervals is as follows: Originally, the well was completed in the Atoka. A substantial amount of production data was gathered during this period and a curve was fit to the subsequent decline. The Atoka was then temporarily plugged back and the Wolfcamp was perforated and produced to obtain a similar decline curve. The result of this is that both the Atoka and Wolfcamp production rates are known quantities and therefore, when the Penn is added to the total, all one has to do is subtract the known rates from the total to obtain the incremental Penn allocation.

Rod pumping equipment will be utilized to keep the PBHP as low as possible to prevent crossflow.

Enclosed is the pertinent data supporting this application as outlined in Rule 303-A. If additional information is necessary, please advise.

Sincerely. · Juna

Walter J. Dueease

WJD/dlt Enclosure h:\dueease\ocd\warn226

A subsidiary of USX Corporation

DHC-2083



STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

> OIL CONSERVATION DIVISION HOBBS DISTRICT OFFICE

GOVERNOR

171

POST OFFICE BOX 1980 HOBBS, NEW MEXICO 88241-1980 (505) 393-6161

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

RE: Proposed: MC DHC NSL NSP SWD WFX PMX

Gentlemen:

I have examined the application for the:

aroth Operator No. 33541 Lease

and my recommendations are as follows:

Yours very truly,

ØK

no l

Chris Williams Supervisor, District l

/ed

Marathon Oil Company Warn State A/C 2 #26 Lot 5, 2180' FNL & 400' FWL Sec. 6, T-18-S, R-35-E Atoka, Wolfcamp, and Upper Penn Pools Vacuum Field Lea County, New Mexico

Offset Operator and Address:

Texaco Exploration and Production Inc. Heritage Center P. O. Box 3109 Midland, TX 79702-3109