

September 1, 1998

Mr. Chris Williams District I Supervisor Oil Conservation Division P.O. Box 1980 Hobbs, NM 88240

P.O. Box 2490 Hobbs, New Mexico 88240 Telephone 505/393-7106

DHC-1807

Re: Request for Exception to Rule 303-A Downhole Commingling McCallister St. No. 12 UL "L", 1,945' FSL & 850' FWL Sec. 25, T-17-S, R-34-E Abo, Wolfcamp, and Upper Penn Pools Vacuum Field Lea County, New Mexico

Dear Mr. Williams:

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, Abo; Vacuum, Wolfcamp; and Vacuum, Penn pools.

The McCallister St. No. 12 was recently drilled as an Atoka producer. However, the Atoka was abandoned due to uneconomical production and was completed in the Penn formation. Due to marginal Penn Production, the Penn and Wolfcamp were downhole commingled per DHC-1807. Unfortunately, the Penn and Wolfcamp production has also proved to be uneconomical. For this reason, Marathon is requesting to downhole commingle the Penn, Wolfcamp, and Abo to maximize the economical production from the well. Rod pumping equipment will be utilized to keep the PBHP as low as possible to prevent crossflow.

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

Sincerely,

Gh J. Shuf

Andrew J. Schwandt Production Engineer

n:\regltory\commling\dhc\c>verpag\mcal12\_i Enclosure



P.O. Box 2490 Hobbs, New Mexico 88240 Telephone 505/393-7106

September 1, 1998

Mr. Pete Martinez Commissioner of Public Lands State Land Office Building P.O. Box 1148 Santa Fe, NM 87504-1148

Re: Request for Exception to Rule 303-A Downhole Commingling McCallister St. No. 12 UL "L", 1,945' FSL & 850' FWL Sec. 25, T-17-S, R-34-E Abo, Wolfcamp, and Upper Penn Pools Vacuum Field Lea County, New Mexico

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Andrew J. Schwandt Production Engineer

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P.O. Box 2490 Hobbs, New Mexico 88240 Telephone 505/393-7106

September 1, 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 McCallister St. No. 12 UL "L", 1,945' FSL & 850' FWL Sec. 25, T-17-S, R-34-E Abo, Wolfcamp, and Upper Penn Pools Vacuum Field Lea County, New Mexico

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alm J. Schump

Andrew J. Schwandt Production Engineer

n:\reghtory\commling\dhc\coverpag\mcal12\_h Enclosure

#### REQUEST FOR EXCEPTION TO RULE 303-A McCallister St. No. 12 Vacuum Field

#### A: Operator

Marathon Oil Company P.O. Box 2409 Hobbs, NM 88241-2409

#### B: Lease Name and Well Number

McCallister St. No. 12 UL "L" 1945' FSL & 850' FWL Sec. 25, T-17-S, R-34-E Lea Co., New Mexico Vacuum: Abo, Wolfcamp & Upper Penn Pools

#### C: Plats and Offset Operators

Attached

D: Form C-116

Attached

#### E: Production Decline Curves

Attached

#### F: Estimated Bottomhole Pressures

Vacuum, Abo - 2000 psi Vacuum, Upper Penn - 2000 psi Vacuum, Wolfcamp - 2500 psi

#### G: Fluid Characteristics

Marathon has additional wells within the same lease which are downhole commingled in the Abo, Wolfcamp, and Penn zones without compatibility problems.

#### H: Value

Marathon receives the same price for the products from each zone and value will not be adversely affected.

Request for Exeption to Rule 303-A McCallister St. No. 12 Page 2

#### I: Production Allocation

#### Per DHC -1807

<u>Pool</u>	<u>Oil</u>	<u>Gas</u>	<u>Water</u>
Vacuum, Wolfcamp Vacuum, Upper Penn	65% 35%		

## Using DHC - 1807 allocation %

<u>Pool</u>	<u>BOPD</u>	<u>MCFPD</u>	<u>BWPD</u>	
Vacuum, Wolfcamp Vacuum, Upper Penn	15 <u>8</u> 23	64 <u>110</u> 174	0.77 <u>0.23</u> 1	Well Test on 7/15/98

Pool	<u>BOPD</u>	<b>MCFPD</b>	<u>BWPD</u>	Estimate Method
Vacuum, Wolfcamp Vacuum, Upper Penn Vacuum, Abo	15 8 <u>70</u> 93	64 110 <u>109</u> 283	0.77 0.23 <u>12</u> 13	Pre-work over Pre-work over Post work incremental production Well Test on 8/20/98
Allocated Percentag	es <u>Oil %</u>	<u>Gas %</u>	<u>Water %</u>	
Post-workover utilizin	ng above produc 75%	ction 38%	92%	

FOST-WORKOVER demining at		000/	000/
Vacuum, Abo	75%	38%	92%
Vacuum, Wolfcamp	16%	23%	6%
Vacuum, Upper Penn	<u>9%</u>	<u>39%</u>	<u>2%</u>
Total	100	100	100

#### J: Ownership

Ownership of all zones is common and correlative rights will not be violated.

# K: Offset Operator Notification

By copy of this letter we are notifying all offset operators (attached) of the proposed commingling, by certified mail.



Marathon Oil Company McCallister St. No. 12 UL "L", 1945' FSL & 850' FWL Section 25, T-17-S, R-34-E Lea County, New Mexico Vacuum Field

**Offset Operators and Addresses** 

Conoco Inc. 10 Desta Drive, Suite 100W Midland, TX 79705

Mobil Exploration and Producing U.S. Inc. 500 W. Illinois, Midland, TX 79701 P.O. Box 633, Midland, TX 79702-0633

Texaco Exploration and Producing Inc. Heritage Center, Midland, TX 79701 P.O. Box 3109, Midland, TX 79702-3109 State of New Mexico Energy, Minerals and Natural Resources Department

# **Revised 1/1/89** Form C-116

OIL CONSERVATION DIVISION 2040 Pacheco St. Santa Fe, NM 87505

DISTRICT II 811 S. 1st Street, Artesia, NM 88210-2834 DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

Submit 2 copies to Appropriate District Office. DISTRICT 1 P.O. Box 1980, Hobbs, NM 88240

# **GAS - OIL RATIO TEST**

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(See Rule 301, Rule 1116 & appropriate pool rules.)



WELL TEST PRODUCTION

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OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505 Form C-102 Revised October 18, 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

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OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505

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Form C-102 Revised October 18, 1994 Instructions on back Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

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P.O. Box 2490 Hobbs, New Mexico 88240 Telephone 505/393-7106

September 1, 1998

Conoco Inc. 10 Desta Drive, Suite 100W Midland, TX 79705

Re: Request for Exception to Rule 303-A Downhole Commingling McCallister St. No. 12 UL "L", 1945' FSL & 850' FWL Sec. 25, T-17-S, R-34-E Abo, Wolfcamp, and Upper Penn Pools Vacuum Field Lea County, New Mexico

Ladies and/or Gentlemen:

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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,

limp

Andrew J. Schwandt Production Engineer

n:\regitory\commling\dhc\wio\mcall2\_g Enclosure

Agreed and accepted this	day of	1998
by		, as representative of



P.O. Box 2490 Hobbs, New Mexico 88240 Telephone 505/393-7106

September 1, 1998

Mobil Exploration and Producing U.S. Inc. 500 W. Illinois, Midland, TX 79701 P.O. Box 633, Midland, TX 79702-0633

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Andrew J. Schwandt Production Engineer

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by		, as representative of
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P.O. Box 2490 Hobbs, New Mexico 88240 Telephone 505/393-7106

September 1, 1998

Texaco Exploration and Producing Inc. Heritage Center, Midland, TX 79701 P.O. Box 3109, Midland, TX 79702-3109

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5. Solum

Andrew J. Schwandt Production Engineer

n:\regitory\commling\dhc\wio\mcal12\_i Enclosure

Agreed and accepted this	day of	1998
by		, as representative of

#### EXHIBIT "B" - CASE NO. 11353, ORDER NO. R-10470-A

DISTRICT P.O. Box 1980, Hobbs, NM 88240

DISTRICT NI

DISTRICT II 811 South First St., Artesis, NM 88210

1000 Nie Brazes Rd. Aztec, NM 87410

# State of New Maxico Energy, Minarais and Natural Resources Department **OIL CONSERVATION DIVISION** 2040 S. Pacheco Santa Fa, New Mexico 87505-6429

Form C-107-A New 3-12-96 APPROVAL PROCESS: Administrative \_\_\_Hearing EXISTING WELLBORE X\_YES \_\_NO

#### **APPLICATION FOR DOWNHOLE COMMINGLING**

PO Box 2490 Hobbs, NM 88240 Marathon Oil Company 0087810

McCallister State 12 L. Sec.25. T-17-S. R-34-E UL Lea CAR

ing Unit Lease Types: Icheck 1 or more) OGRID NO. \_\_\_\_\_014021 API NO. \_30-025-33954 X , (and/or) Fee 6431 , State Federal Property Code

The following facts are submitted in support of downhole commingling:	Upper Zonz	Intermediate Zones	Lawer Zone
1. Pool Name and Pool Code	N.Vacuum; Abo 61760	Vacuum; Wolfcamp 62340	Vacuum; Upper Penn 62320
2. Top and Bottom of Pay Section (Perforations)	8379-9228'	9541-10,002'	10,964-10,994'
3. Type of production (Oil or Gas)	011	011	011
4. Method of Production (Flowing or Artificial Lift)	Artificial Lift	Artificial Lift	Artificial Lift
5. Bottomhole Pressure Oil Zones - Artificial Lift; Estimated Current	e. (Current) 100 PBHP 2000 SBHP	•. 100 PBHP 2500 SBHP	•. 100 PBHP 2000 SBHP
Gas & Oil - Flowing: Gas & Oil - Flowing: Messured Current All Gas Zones: Estimated Or Measured Original	b. <sup>(Original)</sup>	b.	b.
6. Oil Gravity ( <sup>®</sup> API) or Ges BTU Content	39 API	40 API	41 API
7. Producing or Shut-In?	Producing	Producing	Producing
Production Marginal? (yes or no)	Yes	Yes	Yes
<ul> <li>If Shut-In, give data and oil/gas/ water rates of last production</li> <li>Note: For new zones with no production history, applicant shall be required to attach</li> </ul>	Date: Rates:	Date: Ratas:	Data: Rates:
<ul> <li>Production estimates and supporting data</li> <li>If Producing, give date andoll/gas/ water rates of recent test (within 80 days)</li> </ul>	Date: 8/20/98 Rates: 70/109/12	Dote: 8/20/98 Rates: 15/64/0.77	Dole: 8/20/98 Rates: 8/110/0.23
8. Fixed Percentage Allocation Formula -% for each zone	<sup>0∦:</sup> 75 % <sup>Gas:</sup> 38 %	0#: 16 % <sup>Gas:</sup> 23 %	ON: 9% GBS: 39%

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? 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?  $\frac{\underline{X}}{\underline{X}} \frac{\underline{Y}es}{\underline{Y}es} = \frac{\underline{No}}{\underline{No}} \frac{\underline{No}}{\underline{No}}$ 

11. Will cross-flow occur? Yes X 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)

ORDER NO(S).

12. Are all produced fluids from all commingled zones compatible with	th each other?	<u> </u>
10 14/01 the volue of production he despected by commingling?	Vac X No	lif Ven attach evolor

13.	. Will the value of production be decreased by commingling?	Yes	X No	(If Yes,	attach i	explanation)
1.4	If this wall is an ar communitized with state or federal lands	aithar tha	Commierei	onar of Pu	blic Land	de or the

' the 14. If this well is on, or communitized with, state or receral lands, either the Commissioner of Public Lands of the United States Bureau of Land Management has been notified in writing of this application. X Yes No

15. NMOCD Reference Cases for Rule 303(C) Exceptions:

16. ATTACHMENTS

IMENTS:
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 explaination.)
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 inf	ormation above is	true and complete to	the best of my knowledg	e and belief.

SIGNATURE <u><u><u></u></u></u>	J. Schurt	TITLE Production Engineer DATE 9/2/98	
TYPE OR PRINT NAME	Andrew J. Schwandt	TELEPHONE NO. ( 505 ) 393-7106	