

DHC 9/30/98

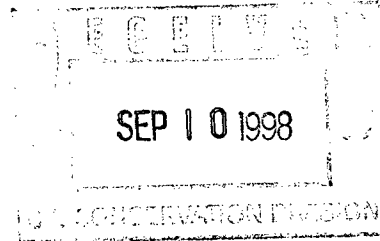
Houston Division  
Production Operations, United States



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

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, 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,

A handwritten signature in cursive script, appearing to read 'Andrew J. Schwandt'.

Andrew J. Schwandt  
Production Engineer

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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  
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Vacuum Field  
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Andrew J. Schwandt  
Production Engineer

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Enclosure



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

September 1, 1998

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

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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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.

**I: Production Allocation**

**Per DHC -1807**

<u>Pool</u>	<u>Oil</u>	<u>Gas</u>	<u>Water</u>
Vacuum, Wolfcamp	65%	37%	77%
Vacuum, Upper Penn	35%	63%	23%

**Using DHC - 1807 allocation %**

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

<u>Pool</u>	<u>BOPD</u>	<u>MCFPD</u>	<u>BWPD</u>	<u>Estimate Method</u>
Vacuum, Wolfcamp	15	64	0.77	Pre-work over
Vacuum, Upper Penn	8	110	0.23	Pre-work over
Vacuum, Abo	<u>70</u>	<u>109</u>	<u>12</u>	Post work incremental production
	93	283	13	Well Test on 8/20/98

<u>Allocated Percentages</u>	<u>Oil %</u>	<u>Gas %</u>	<u>Water %</u>
Post-workover utilizing above production			
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.

Submit 2 copies to Appropriate District Office.

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

811 S. 1st Street, Artesia, NM 88210-2834

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico

Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

2040 Pacheco St.

Santa Fe, NM 87505

Form C-116

Revised 1/1/89

### GAS - OIL RATIO TEST

Operator Marathon Oil Company		Pool Vacuum; Wolfcamp / Upper Penn / Abo		County Lea											
Address P.O. Box 2409 Hobbs, NM 88240		TYPE OF TEST - (X)		Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/>											
LEASE NAME  McCallister State DHC Application Zone 011X Gasx Abo 75 38 Wolfcamp 16 23 Upper Penn 9 39	WELL NO. 12	LOCATION			DATE OF TEST 9/20/98	CHOKE SIZE P	TBG. PRESS. 250	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS 24	PROD. DURING TEST			GAS-OIL RATIO CU.FT/BBL		
		U	S	T						R	WATER BBL.S.	GRAV. OIL		OIL BBL.S.	GAS M.C.F.
FOR INFORMATION ONLY															

#### Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60°F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

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

*Andrew J. Schwandt*  
Signature

Andrew J. Schwandt

Production Engineer

Printed name and title

9/2/98

393-7106

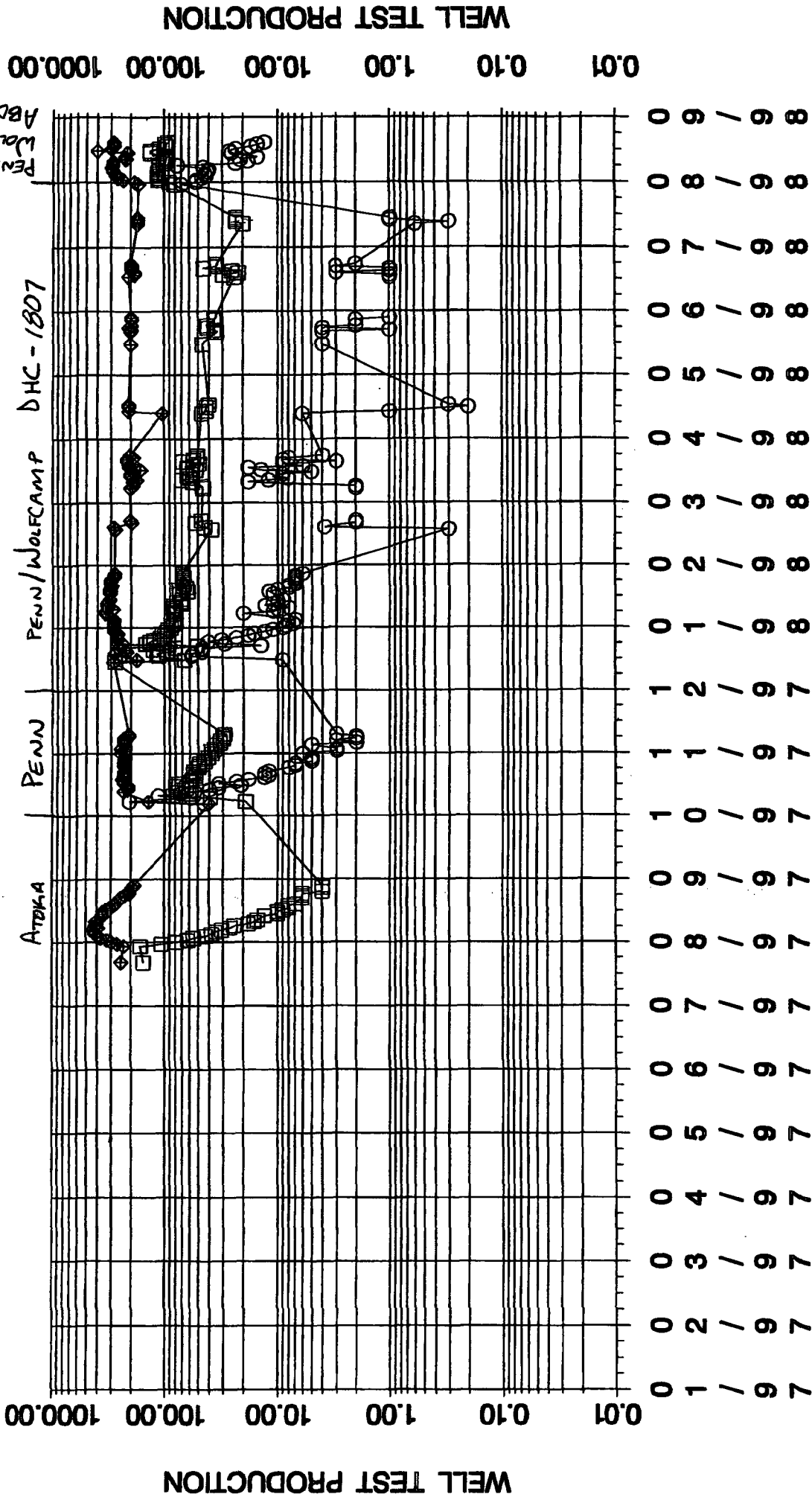
Date

Telephone No.

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

# Midland Operations

VACUUM MCCALLISTER STATE - NO.12



DATE

□-□-□ TEST OIL, BOPD    ○-○-○ TEST WTR, BWPD    ◇-◇-◇ TEST GAS, MCFPD  
 \*\*\* % RUN TIME

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102

Revised October 18, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-33954	<sup>2</sup> Pool Code 62340	<sup>3</sup> Pool Name Vacuum: Wolfcamp
<sup>4</sup> Property Code 6431	<sup>5</sup> Property Name McCallister State	<sup>6</sup> Well Number 12
<sup>7</sup> OGRID No. 014021	<sup>8</sup> Operator Name Marathon Oil Company	<sup>9</sup> Elevation GL 4008 KB 4026

<sup>10</sup> Surface Location

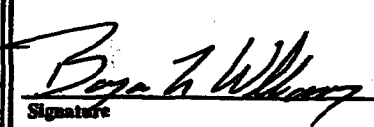
UL or lot no. L	Section 25	Township 17S	Range 34E	Lot. Idn	Feet from the 1945	North/South Line South	Feet from the 850	East/West line West	County Lea
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
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<sup>12</sup> Dedicated Acres 80	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

				<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.   Signature Bryan L. Williams Printed Name Production Engineer Title January 13, 1998 Date
				<sup>18</sup> 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.  ORIGINAL - APRIL 22, 1997 Date of Survey Signature and Seal of Professional Surveyer:  Certificate Number

850' →

← 80 DEDICATED ACRES

1945'



State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102

Revised October 18, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-33954		<sup>2</sup> Pool Code 62320		<sup>3</sup> Pool Name Vacuum; Upper Penn	
<sup>4</sup> Property Code 6431		<sup>5</sup> Property Name McCallister State			<sup>6</sup> Well Number 12
<sup>7</sup> OGRID No. 014021		<sup>8</sup> Operator Name Marathon Oil Company			<sup>9</sup> Elevation GL 4008 KB 4026

<sup>10</sup> Surface Location

UL or lot no. L	Section 25	Township 17S	Range 34E	Lot. Ida	Feet from the 1945	North/South Line South	Feet from the 850	East/West line West	County Lea
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot. Ida	Feet from the	North/South Line	Feet from the	East/West line	County
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## DISTRICT I

P.O. Box 1988, Tulsa, OK 74101-1988

State of New Mexico

Energy, Minerals and Natural Resources Department

## DISTRICT II

P.O. Box 1000, Albuquerque, NM 87103-1000

## DISTRICT III

5000 Rio Grande Rd., Albuquerque, NM 87110

## DISTRICT IV

P.O. Box 2088, Santa Fe, NM 87504-2088

## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 1 Copy

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-33954</b>	Pool Code	Pool Name <b>Vacuum (Abo, Wolfcamp, Upper Pennsylv.)</b>
Property Code <b>63476431</b>	Property Name <b>MCCALLISTER STATE</b>	Well Number <b>12</b>
OGARD No. <b>14021</b>	Operator Name <b>MARATHON OIL COMPANY</b>	Acres <b>4008</b>

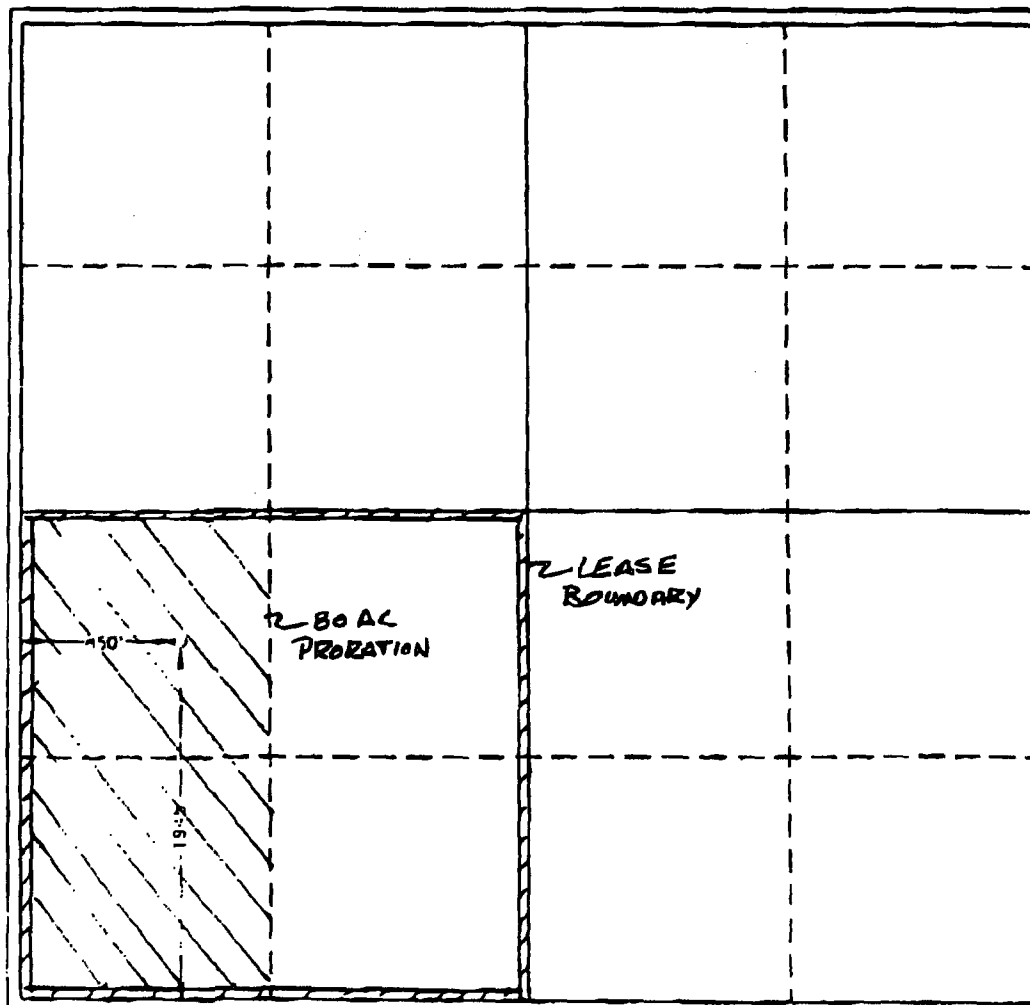
## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
<b>L</b>	<b>25</b>	<b>17 S</b>	<b>34 E</b>		<b>1945</b>	<b>SOUTH</b>	<b>850</b>	<b>WEST</b>	<b>LEA</b>

## 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
Dedicated Acres <b>80</b>	Joint or Infill	Consolidation Code	Order No.						

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



## OPERATOR CERTIFICATION

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

*Walter J. Nordt*  
Signature

D. P. Nordt  
Printed Name

Drilling Superintendent  
Title

5/7/97  
Date

## SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes or aerial surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

APRIL 22, 1997  
Date Surveyed

Signature (or Seal) of

Professional Surveyor

*Ronald L. Eidson*  
W.D. (Num) 27-17-30

Certificate No. 27-17-30

Ronald L. Eidson  
Professional Surveyor

Houston Division  
Production Operations, United States



**Marathon  
Oil Company**

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:

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,

Andrew J. Schwandt  
Production Engineer

n:\regitory\comming\dhc\wio\mccl12\_g  
Enclosure

Agreed and accepted this \_\_\_\_\_ day of \_\_\_\_\_ 1998

by \_\_\_\_\_, as representative of

Houston Division  
Production Operations, United States



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

Re: Request for Exception to Rule 303-A  
Downhole Commingling  
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Andrew J. Schwandt  
Production Engineer

n:\regitory\comming\dhc\wio\mcal12\_h  
Enclosure

Agreed and accepted this \_\_\_\_\_ day of \_\_\_\_\_ 1998

by \_\_\_\_\_, as representative of

Houston Division  
Production Operations, United States



**Marathon  
Oil Company**

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

Re: Request for Exception to Rule 303-A  
Downhole Commingling  
McCallister St. No. 12  
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Sincerely,

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Andrew J. Schwandt  
Production Engineer

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

Agreed and accepted this \_\_\_\_\_ day of \_\_\_\_\_ 1998

by \_\_\_\_\_, as representative of

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

**DISTRICT II**  
911 South First St., Artesia, NM 88210

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

**OIL CONSERVATION DIVISION**

2040 S. Pacheco  
Santa Fe, New Mexico 87505-6428

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

**APPROVAL PROCESS:**

☐ Administrative ☐ Hearing

**EXISTING WELLBORE**

☒ YES ☐ NO

**APPLICATION FOR DOWNHOLE COMMINGLING**

Operator Marathon Oil Company PO Box 2490 Hobbs, NM 88240

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

Well No. 31760 Unit Ltr. Sec. 25, T-17-S, R-34-E County Lea

OGRID NO. 014021 Property Code 6431 API NO. 30-025-33954 Spacing Unit Lease Types: (check 1 or more)  
Federal ☐ State ☒ Land/Lease Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zones	Lower 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)	Oil	Oil	Oil
4. Method of Production (Flowing or Artificial Lift)	Artificial Lift	Artificial Lift	Artificial Lift
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) 100 PBHP 2000 SBHP b. (Original)	a. 100 PBHP 2500 SBHP b.	a. 100 PBHP 2000 SBHP b.
6. Oil Gravity ( $^{\circ}$ API) or Gas BTU Content	39 API	40 API	41 API
7. Producing or Shut-In?	Producing	Producing	Producing
Production Marginal? (yes or no)	Yes	Yes	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, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:  Date: 8/20/98 Rates: 70/109/12	Date: Rates:  Date: 8/20/98 Rates: 15/64/0.77	Date: Rates:  Date: 8/20/98 Rates: 8/110/0.23
8. Fixed Percentage Allocation Formula - % for each zone	Oil: 75 % Gas: 38 %	Oil: 16 % Gas: 23 %	Oil: 9 % Gas: 39 %

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 other? ☒ 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(C) 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 Andrew J. Schwandt TITLE Production Engineer DATE 9/2/98

TYPE OR PRINT NAME Andrew J. Schwandt TELEPHONE NO. ( 505 ) 393-7106