

DHC 9/30/98

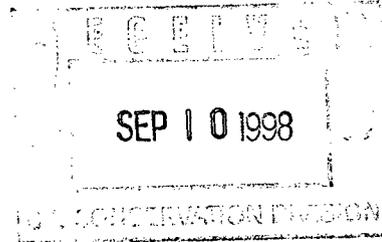
Houston Division  
Production Operations, United States



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

n:\regtory\comming\dhc\coverpag\mcal12\_h  
Enclosure

Houston Division  
Production Operations, United States



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  
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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		Pool		County		Lea							
Marathon Oil Company		Vacuum; Wolfcamp / Upper Penn / Abo											
Address		TYPE OF TEST - (X)		Completion		Special							
P.O. Box 2409 Hobbs, NM 88240		<input checked="" type="checkbox"/> Scheduled <input type="checkbox"/> Special		<input type="checkbox"/> <input checked="" type="checkbox"/>		<input type="checkbox"/> <input checked="" type="checkbox"/>							
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS-OIL RATIO CU.FT/BBL
		U	S	T						R	WATER BBL.S.	GRAV. OIL	
McCallister State	12	L	25	17S	34E	9/20/98	P	250	24	13	93	283	
DHC Application										12	70	109	1557
Zone 011X Gasx										.77	15	64	4267
Abo	38									.23	8	110	13,750
Wolfcamp	23												
Upper Penn	39												

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  
 Printed name and title

Production Engineer

9/2/98  
 Date

393-7106  
 Telephone No.

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



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

Box 1980, Hobbs, NM 88241-1980  
District II  
611 S. 1st Street, Artesia, NM 88210-2834  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

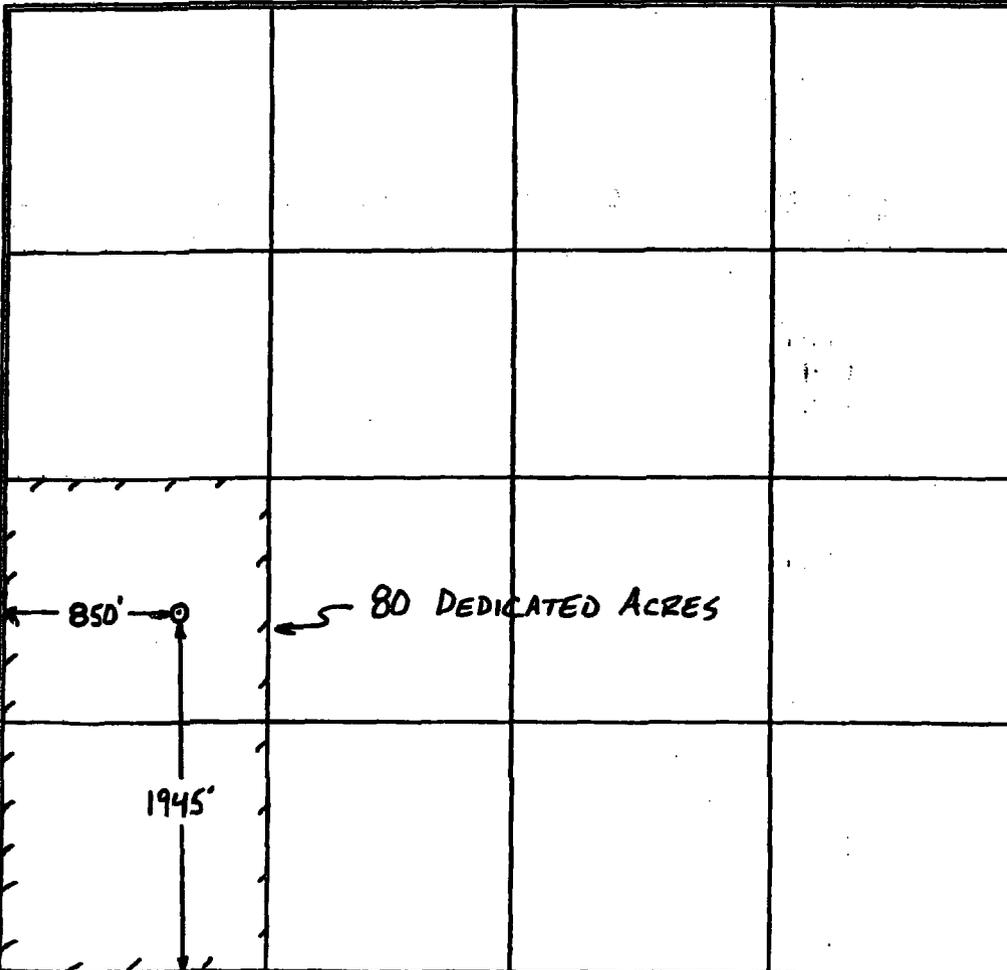
<sup>1</sup> API Number 30-025-33954		<sup>2</sup> Pool Code 62340		<sup>3</sup> Pool Name Vacuum; Wolfcamp	
<sup>4</sup> Property Code 6431		<sup>5</sup> Property Name McCallister State			<sup>6</sup> Well Number 12
<sup>7</sup> OGRID No. 014021		<sup>8</sup> Operator Name Marathon Oil Company			<sup>9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

<sup>10</sup> Surface Location									
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
L	25	17S	34E		1945	South	850	West	Lea

<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 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.

*Bryan L. Williams*  
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 Surveyor:  
Certificate Number

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised October 18, 1994

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

1989, Hobbs, NM 88241-1989  
District II  
811 S. 1st Street, Artesia, NM 88210-2834  
District III  
1000 Rio Brazos Rd., Afton, NM 87410  
District IV  
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.	Section	Township	Range	Lot. Ida	Feet from the	North/South Line	Feet from the	East/West line	County
L	25	17S	34E		1945	South	850	West	Lea

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

DISTRICT I  
P. O. Box 1988, Hobbs, NM 88241-1988

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT II  
P. O. Drawer 80, Artesia, NM 88211-0080

OIL CONSERVATION DIVISION  
P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT III  
5000 Rio Brazos Rd., Lordsburg, NM 87610

AMENDED REPORT

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

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>
OCAD No. <b>14021</b>	Operator Name <b>MARATHON OIL COMPANY</b>	Shoreline <b>4008</b>

Surface Location

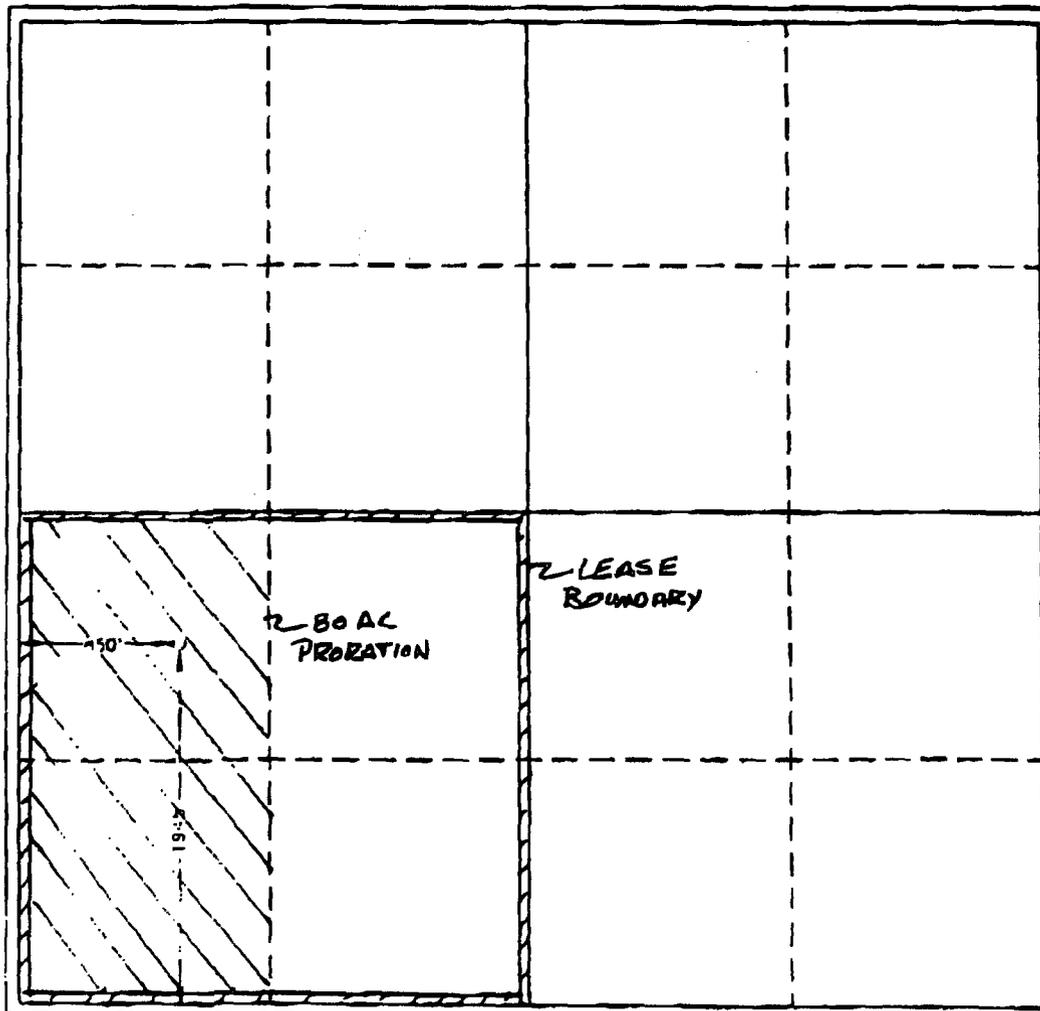
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
L	25	17 S	34 E		1945	SOUTH	850	WEST	LEA

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	Joint or Infill	Consolidation Code	Order No.
80			

NO ALLOWABLE WELL 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.

*D. P. 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, 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

*Ronald E. Eidson*  
Signature (or Seal of Professional Surveyor)

*Ronald E. Eidson*  
W.O. Num 27-17-30

Certificate No. 4249  
RONALD E. EIDSON  
SURVEYOR

Houston Division  
Production Operations, United States



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,

A handwritten signature in black ink, appearing to read 'A J Schwandt'.

Andrew J. Schwandt  
Production Engineer

n:\regitry\comming\dho\wio\mcal12\_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  
McCallister St. No. 12  
UL "L", 1945' FSL & 850' FWL  
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Production Engineer

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Enclosure

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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

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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Andrew J. Schwandt  
Production Engineer

n:\regitry\comming\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 I**  
P.O. Box 1980, Hobbs, NM 88240

**DISTRICT II**  
811 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 County

Well No. 312 Unit Ltr. - Sec - Twp - Rge UL L, Sec. 25, T-17-S, R-34-E

Spacing Unit Lease Types: (check 1 or more)  
OGRID NO. 014021 Property Code 6431 API NO. 30-025-33954 Federal  State  Land/for 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	a. 100 PBHP 2500 SBHP	a. 100 PBHP 2000 SBHP
	b. (Original)	b.	b.
6. Oil Gravity (° API) or Gas BTU Content	39 API	40 API	41 API
7. Producing or Shut-In?	Producing	Producing	Producing
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, give date and oil/gas/water rates of recent test (within 60 days)	Yes	Yes	Yes
	Date: Rates:	Date: Rates:	Date: Rates:
	Date: 8/20/98 Rates: 70/109/12	Date: 8/20/98 Rates: 15/64/0.77	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