

1-30-90

Mid-Continent Region
Production United States

OIL CONSERVATION DIVISION
RECEIVED

P.O. Box 552
Midland, Texas 79702
Telephone 915/682-1626
JUL 13 AM 9 10



July 3, 1990

Mr. David Catanach
Energy & Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Request for Exemption to Rule 303-A
Downhole Commingling
Mark Owen No. 7
Section 35-21S-37E
Wantz Abo, Wantz (Granite Wash)
Lea County, New Mexico

Dear Mr. Catanach:

Marathon Oil Company respectfully requests administrative approval for an exemption to Rule 303-A to permit the downhole commingling of production from the Wantz Abo and Wantz Granite Wash pools in the subject well.

Well No. 7 was originally completed in the Granite Wash in 1975 and dualled with the Wantz Abo in 1976 under the Division Order No. MC-2265.

On May 1, 1989, the Wantz Granite Wash was shut-in. On May 3, the well was weighed with a dynamometer. From the dynamometer pump card a fluid load was calculated and Nabla's Pump Intake Pressure program was run. The pump intake pressure at pump depth of 7137' was calculated to be 460 psi with a fluid gradient of 0.22. A static bottom-hole pressure of 494 psi was calculated at mid perfs (7292').

On June 14, 1990, a pressure bomb was run into the tubing down to mid-perfs of the Wantz Abo (7025'). The static pressure was 790 psi.

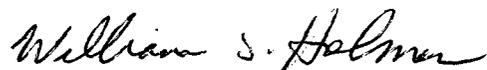
The pressure of the Granite Wash is within 50% of that of the Wantz Abo. Marathon believes that the two zones can be downhole commingled and produced without crossflow or a loss of reserves in either zone. The last test on the Wantz Abo shows it producing 14 BOPD, 0 BOPD, and 52 MCFD. Therefore, the well should remain in a pumped off condition. This would make the producing pressure less than 100 psi while being artificially lifted.

Mr. David Catanach
July 3, 1990
Page 2

All ownership (WI, Royalty and ORRI) in the wellbore is the same. Commingling will not jeopardize future secondary recovery operations. As required, additional information is attached and all offset operators are being notified by copy of this application.

In summary, Marathon feels that as a prudent operator, we can effectively downhole commingle the Wantz Abo and the Wantz Granite Wash and maximize production by doing so. We look forward to your approval of this application.

Sincerely yours,



William D. Holmes
Midland Operations Superintendent

WPB/lr
Attachments

005-90

ATTACHMENT 1

Request for Exemption to Rule 303-A
Mark Owen No. 7
Wantz (Abo), Wantz (Granite Wash) Oil Pools
Lea County, New Mexico

Reference: Section C-2 Rule 303

- a) Marathon Oil Company
P. O. Box 552
Midland, Texas 79702
- b) Mark Owen No. 7
660' FSL and 2310' FWL, Sec. 35-21S-37E
Lea County, New Mexico (See Attachment 2 for form C-103)
- c) Plat of the area can be seen on Attachments 3 and 4.
- d) Form C-116 for Wantz Abo completion (see Attachment 5).
Form C-116 for Granite Wash completion (see Attachment 6).
- e) Production decline curve for the Wantz Abo completion (see Attachment 7).
Production decline curve for the Wantz Granite Wash completion (see Attachment 8).
- f) Measured bottomhole pressure for both zones in question (48 hr. static pressure).

Wantz Abo (790 psi)
Wantz Granite Wash (494 psi)
- g&h) The oil produced from the Wantz Abo and the Granite Wash have gravities of 39° and 40° API, respectively. Because the oil gravities are so similar, the value of the commingled stream should not be less than the value of the two separate streams. Water analyses of the two zones show little difference between the two streams (see Attachments 9 & 10).
- i) Production from latest GOR test shows:
- | <u>Zone</u> | <u>Oil
Bbls</u> | <u>Oil
(%)</u> | <u>Gas
(MCFD)</u> | <u>Gas
(%)</u> | <u>Water
(BWPD)</u> |
|--------------|---------------------|--------------------|-----------------------|--------------------|-------------------------|
| Wantz Abo | 14 | 77.8% | 52 | 69.3% | 0 |
| Granite Wash | <u>4</u> | <u>22.2%</u> | <u>23</u> | <u>30.7</u> | <u>0</u> |
| Total | 18 | 100.0% | 75 | 100.0% | 0 |
- j) By copy of this letter, we are notifying all offset operators of the proposed commingling by certified mail (see attached letters).

Submit 3 Copies
to Appropriate
District Office

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

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

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

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER	7. Lease Name or Unit Agreement Name Mark Owen
2. Name of Operator Marathon Oil Company	8. Well No. 7
3. Address of Operator P. O. Box 552, Midland, Texas 79702	9. Pool name or Wildcat Wantz Granite Wash, Wantz Abo
4. Well Location Unit Letter <u>N</u> : <u>660</u> Feet From The <u>South</u> Line and <u>2310</u> Feet From The <u>West</u> Line Section <u>35</u> Township <u>21S</u> Range <u>37E</u> NMPM Lea County	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3367' GL 3378' KB	

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>		CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER: <u>Downhole commingle</u> <input checked="" type="checkbox"/>		OTHER: _____ <input type="checkbox"/>	

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Request authorization to downhole commingle the Wantz Granite Wash and the Wantz Abo pools.

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

SIGNATURE William D. Holmes TITLE Operations Superintendent DATE 6-19-90
 TYPE OR PRINT NAME William D. Holmes TELEPHONE NO. (915) 682-1626

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Submit to Appropriate
 District Office
 State Lease - 4 copies
 Fee Lease - 3 copies

OIL CONSERVATION DIVISION

P.O. Box 2088
 Santa Fe, New Mexico 87504-2088

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

DISTRICT II
 P.O. Drawer DD, Artesia, NM 88210

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

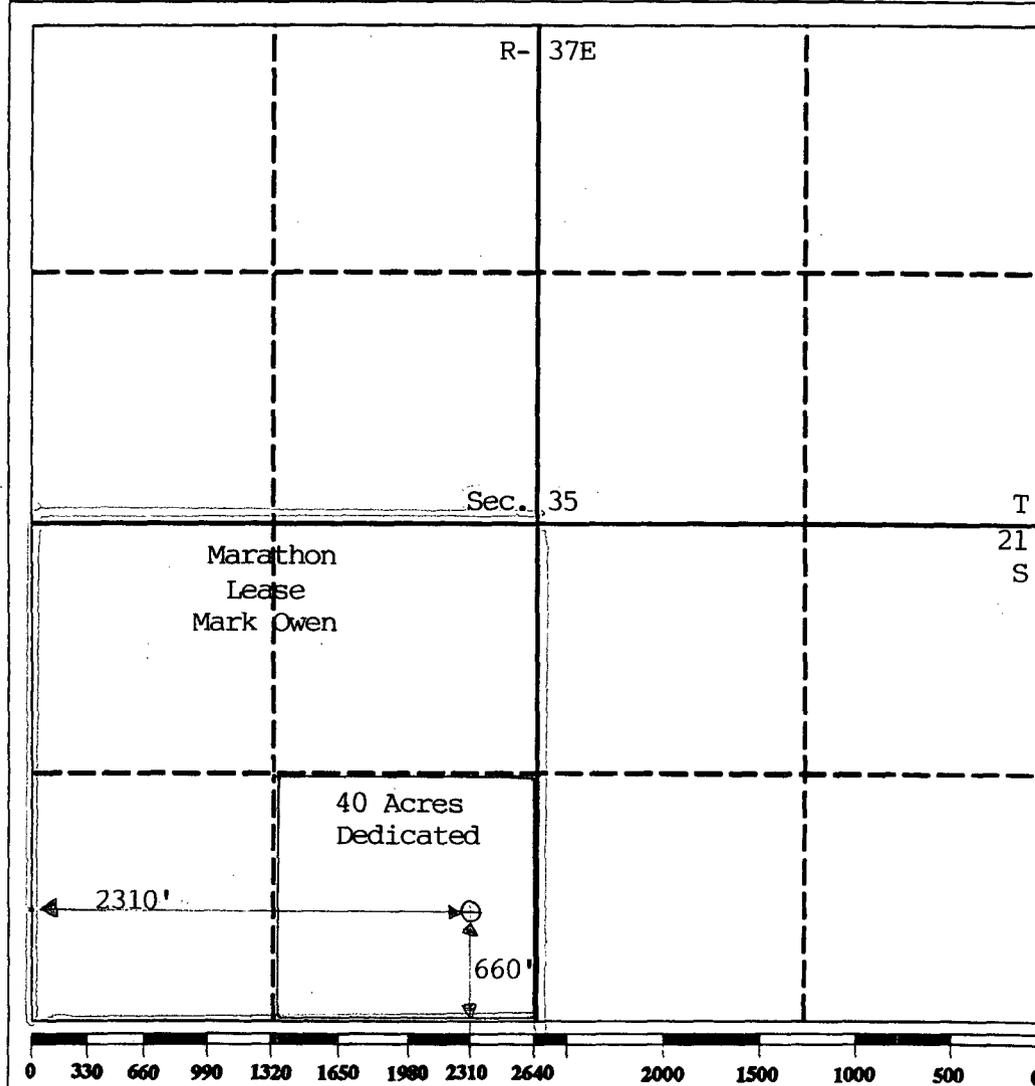
All Distances must be from the outer boundaries of the section

Operator Marathon Oil Company			Lease Mark Owen			Well No. 7		
Unit Letter N	Section 35	Township 21S	Range 37E	County NMPM		Lea		

Actual Footage Location of Well:
 660 feet from the South line and 2310 feet from the West line

Ground level Elev. 3376'	Producing Formation Wantz Abo/Granite Wash	Pool Wantz Abo/Granite Wash	Dedicated Acreage: 40 Acres
-----------------------------	---	--------------------------------	--------------------------------

1. Outline the acreage dedicated to the subject well by colored pencil or hachure 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 interest 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 interest, has been approved by the Division.



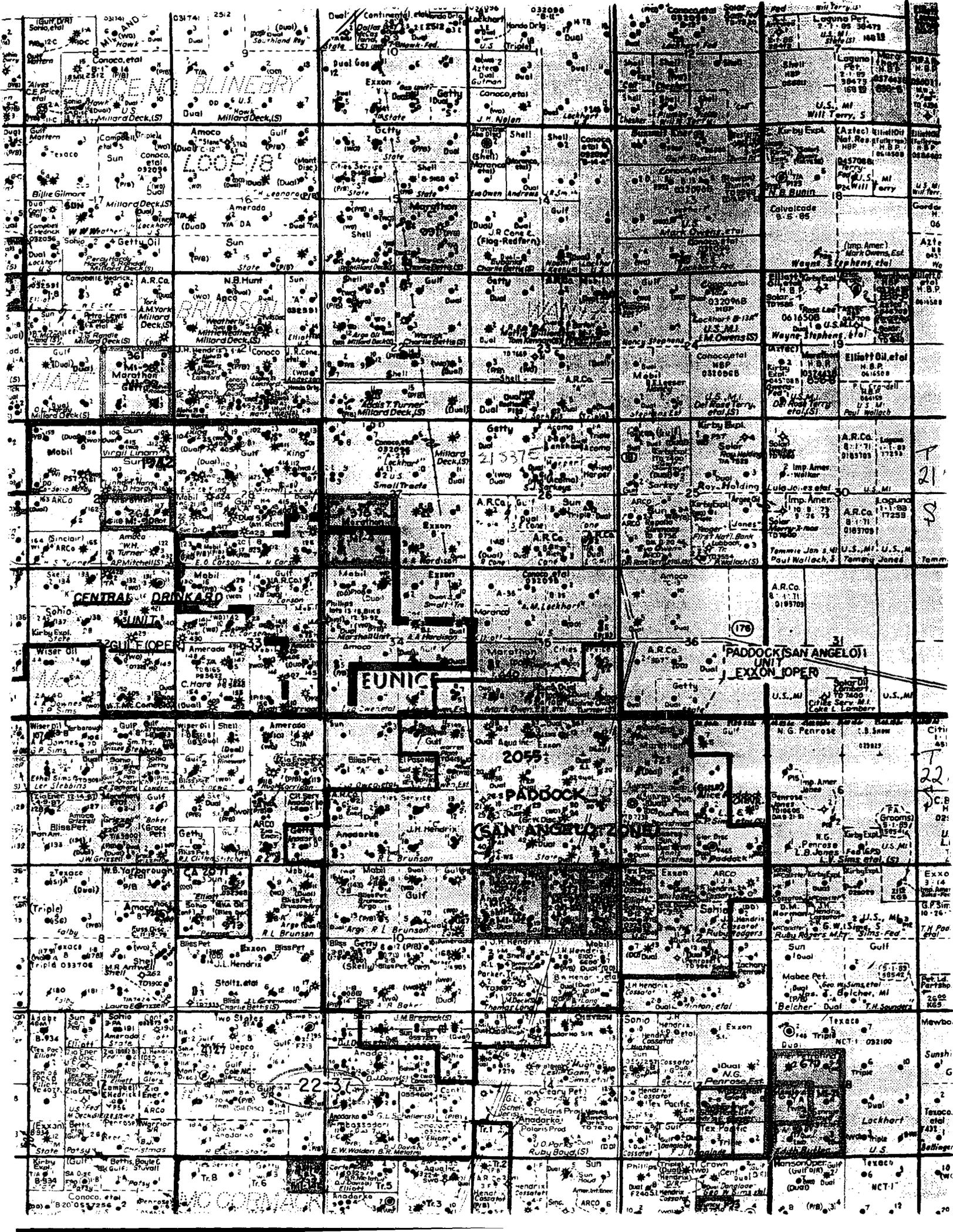
OPERATOR CERTIFICATION
 I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature: *J. R. Jenkins* 7/5/90
 Printed Name: J. R. Jenkins
 Position: Hobbs Production Sup't.
 Company: Marathon Oil Company
 Date: 6-19-90

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 knowledge and belief.

Date Surveyed: _____
 Signature & Seal of Professional Surveyor: _____
 Certificate No.: _____





LOUISIANA

LOUISIANA

LOUISIANA

CENTRAL DRINKARD

LOUISIANA

EUNICE

PADDOCK

SAN ANGELO

PADDOCK(SAN ANGELO)

LOUISIANA

LOUISIANA

LOUISIANA

LOUISIANA

LOUISIANA

LOUISIANA

LOUISIANA

LOUISIANA

LOUISIANA

Submit 2 copies to Appropriate District Office.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

ATTACHMENT 5
State of New Mexico
Energy, Minerals and Natural Resources Department

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-116
Revised 1/1/89

OIL CONSERVATION DIVISION

GAS - OIL RATIO TEST

Operator Marathon Oil Company		Pool Wantz (Abo)		County Lea												
Address P. O. Box 552, Midland, Texas 79702		TYPE OF TEST - (X) Scheduled <input type="checkbox"/> Special <input checked="" type="checkbox"/>		Completion <input type="checkbox"/>												
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	% OF TEST	CHOKESIZE	T.B.G. 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	OIL BBL.S.		GAS M.C.F.
Mark Owen	7	N	35	21	37	5-19-90	F	28/64	60	*	24	0	39	14	52	3714
* Allowable Request																

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.

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

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

Signature *J. R. Jenkins* 7/5/90

J. R. Jenkins, Hobbs Production Sup't.
Printed name and title

Date 6-25-90 (915) 682-1626 Telephone No.

Submit 2 copies to Appropriate District Office.
 DISTRICT I
 P.O. Box 1980, Hobbs, NM 88240
 DISTRICT II
 P.O. Drawer DD, Artesia, NM 88210
 DISTRICT III
 1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
 Energy, Minerals and Natural Resources Department

Form C-116
 Revised 1/1/89

OIL CONSERVATION DIVISION

P.O. Box 2088
 Santa Fe, New Mexico 87504-2088

GAS - OIL RATIO TEST

Operator Marathon Oil Company		Pool Wantz Granite Wash		County Lea										
Address P. O. Box 552, Midland Texas 79702		TYPE OF TEST - (X) <input checked="" type="checkbox"/> Scheduled <input type="checkbox"/> Daily Allowable		Completion <input type="checkbox"/> Special <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 BRLS.	GRAV. OIL BRLS.	GAS M.C.F.	
Mark Owen	7	N	35	21	37	SI	--	30		24	0	4	23	5750

The last test on this well was 2-11-90 and the production for 24 hrs was 4 BOPD & 0 BWPD & GOR 5750. This well has been shut in because of a parted downhole pump.

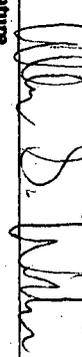
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(See Rule 301, Rule 1116 & appropriate pool rules.)

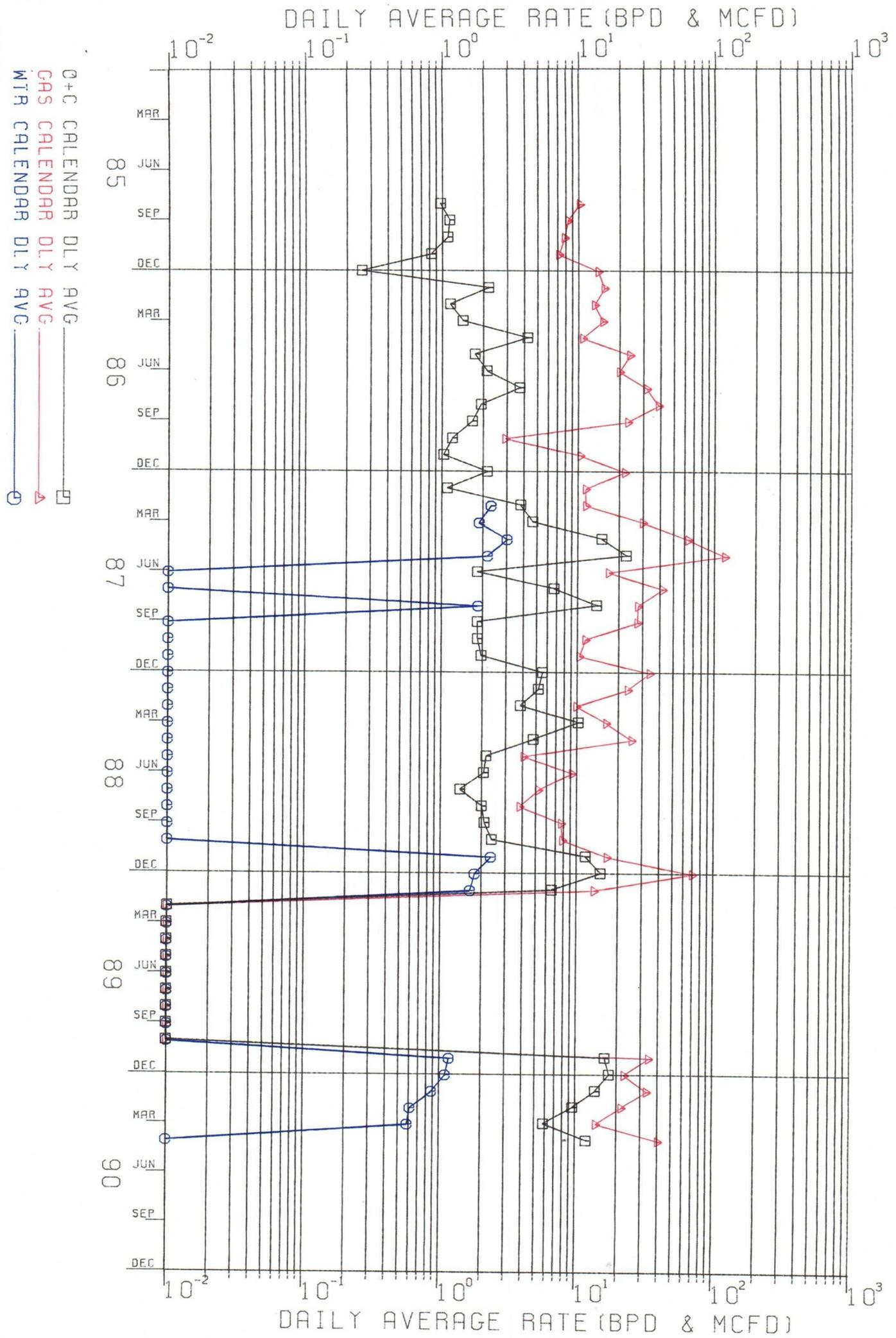
I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Signature  7/5/90

J. R. Jenkins, Hobbs Production Sup't.
 Printed name and title

Date 6-25-90 (915) 682-1626 Telephone No.

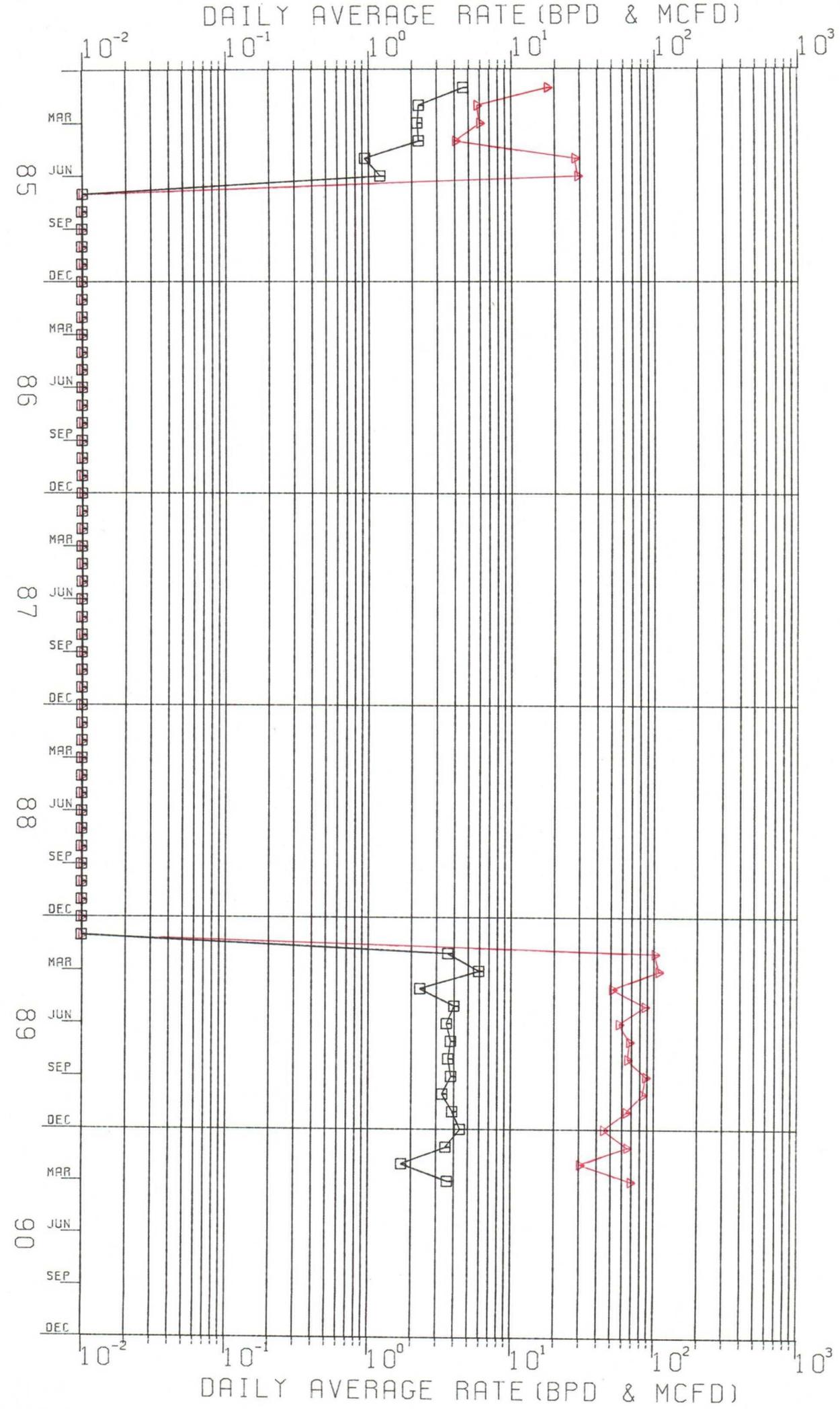
FIELD - WANTZ
 RESERVOIR - RBQ
 LEASE - OWEN, MARK
 WELL - MARK, OWEN-NO. 7



MRRI Q11M

05/29/90

FIELD - WANTZ
 RESERVOIR - GRANITE WASH
 LEASE - OWEN, MARK
 WELL - MARK OWEN-NO. 7 (2)



MBBL/DUM

05/29/90

09:24:39

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : MARATHON
 DATE : 5-11-83
 FIELD, LEASE & WELL : MARK OWEN #7 WANTZ ABO
 SAMPLING POINT :
 DATE SAMPLED : 5-10-83

SPECIFIC GRAVITY = 1.092
 TOTAL DISSOLVED SOLIDS = 136507
 PH = 4.09

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	560	11222.
MAGNESIUM	(MG)+2	340	4133.
SODIUM	(NA).CALC.	1521	34984.
ANIONS			
BICARBONATE	(HCO3)--1	0	0
CARBONATE	(CO3)--2	0	0
HYDROXIDE	(OH)--1	0	0
SULFATE	(SO4)--2	24.7	1187.
CHLORIDES	(CL)--1	2377	84980.
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		117.
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

SCALING INDEX

TEMP

	30C
	86F
CARBONATE INDEX	-3.4
CALCIUM CARBONATE SCALING	UNLIKELY
SULFATE INDEX	2.79
CALCIUM SULFATE SCALING	LIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : MARATHON OIL COMPANY
 DATE : 3-21-83
 FIELD, LEASE & WELL : MARK OWEN WELL #7
 SAMPLING POINT: GRANITE WASH
 DATE SAMPLED : 3-18-83

SPECIFIC GRAVITY = 1.065
 TOTAL DISSOLVED SOLIDS = 97279
 PH = 6.69

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	280	5611.
MAGNESIUM	(MG)+2	130	1580.
SODIUM	(NA), CALC.	1280.	29431.
ANIONS			
BICARBONATE	(HCO3)-1	3.6	219.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	51.0	2450
CHLORIDES	(CL)-1	1635.	57986.
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON (TOTAL)	(FE)		112.
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

SCALING INDEX

TEMP

	30C
	86F
CARBONATE INDEX	153
CALCIUM CARBONATE SCALING	LIKELY
SULFATE INDEX	10.4
CALCIUM SULFATE SCALING	LIKELY

Mid-Continent Region
Production United States



**Marathon
Oil Company**

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

July 3, 1990

Oxy USA, Inc.
Midland District Office
P. O. Box 1919
Midland, Texas 79702

Re: Request for Exemption to Rule 303-A
Downhole Commingling
Mark Owen No. 7
Section 35-21S-37E
Lea County, New Mexico

Gentlemen:

Marathon Oil Company is requesting administrative approval from the New Mexico Oil Conservation Division to downhole commingle production in the above referenced well. The Mark Owen No. 7 well is completed in the Wantz Abo and the Wantz Granite Wash. Combined production should average 18 BOPD and 75 MCFD of gas.

Attached for your scrutiny is a copy of our application. Should you have any questions or concerns, please do not hesitate to call me.

Sincerely,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'William D. Holmes'.

William D. Holmes
Midland Operations Superintendent

WPB/lr
Attachment

003-90

Mid-Continent Region
Production United States



**Marathon
Oil Company**

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

July 3, 1990

Exxon Company USA
P. O. Box 1600
Midland, Texas 79702-1600

Re: Request for Exemption to Rule 303-A
Downhole Commingling
Mark Owen No. 7
Section 35-21S-37E
Lea County, New Mexico

Gentlemen:

Marathon Oil Company is requesting administrative approval from the New Mexico Oil Conservation Division to downhole commingle production in the above referenced well. The Mark Owen No. 7 well is completed in the Wantz Abo and the Wantz Granite Wash. Combined production should average 18 BOPD and 75 MCFD of gas.

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Sincerely,

MARATHON OIL COMPANY

A handwritten signature in cursive script, appearing to read 'William D. Holmes'.

William D. Holmes
Midland Operations Superintendent

WPB/lr
Attachment

003-90



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
 OIL CONSERVATION DIVISION
 HOBBS DISTRICT OFFICE

7-16-90

GARREY CARRUTHERS
 GOVERNOR

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 _____

OIL CONSERVATION DIVISION
 RECEIVED
 90 JUL 20 AM 8 34

Gentlemen:

I have examined the application for the:

Marathon Oil Co. Mark Owen #7-N 35-21-37
 Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
 Jerry Sexton
 Supervisor, District 1

/ed