



**Marathon
Oil Company**

OIL CONSERVATION DIVISION
RECEIVED

94 JUN 27 AM 8 50

P.O. Box 2409
Hobbs, NM 88241-2409
Telephone 505/393-7106

June 20, 1994

State of New Mexico
Oil Conservation Division
Energy and Mineral Department
Mr. David Catanach
PO Box 2088
Santa Fe, NM 87501

RE: **REQUEST FOR EXCEPTION TO RULE 303-A
DOWNHOLE COMMINGLING
LOU WORTHAN WELL NO. 11
UNIT F, 1905' FNL AND 2055' FWL
SECTION 11, T-22-S, R-37-E
TUBB AND DRINKARD FORMATIONS
DRINKARD FIELD
LEA COUNTY, NEW MEXICO**

Dear Mr. Catanach:

Marathon Oil Company respectfully requests administrative approval for an exception to Rule 303-A to permit the downhole commingling of the Tubb and Drinkard formations in the above mentioned well.

Currently, the well is a Tubb producer that is artificially lifted by plunger lift. The plunger lift is efficient as the well produces 2 BOPD and 158 MCFD. The Drinkard is isolated beneath a CIBP. In December of 1990 a workover was conducted to add pay to the Tubb and Drinkard with both zones being stimulated. During the workover two fishing jobs occurred, a packer drill out, three acid jobs and one fracture treatment resulted in a total load of 2960 BW. An estimated 480+ BW was placed on the Drinkard itself. Due to the loading, the Drinkard was isolated under a CIBP and the well converted to a Tubb single producer.

The proposed downhole commingling and rod-up will allow the continued production of the Tubb while de-watering the Drinkard. The rod pumping will prevent cross flow and is expected to return the Drinkard to ± 150 MCFD. By rod pumping both zones, the Tubb will be produced to a lower abandonment pressure while recovering additional reserves from the Drinkard thus preventing waste.

Enclosed is the pertinent data supporting this application as outlined in Rule 303-A. If additional information is necessary, please contact Rick Gaddis at (505) 393-7106.

Sincerely,

A handwritten signature in cursive script, appearing to read 'T.A. Deines'.

T.A. Deines
Northwest Operations
Production Superintendent

RDG:TAD/9480/kc
Attachments

REQUEST FOR EXCEPTION TO RULE 303-A

LOU WORTHAN WELL NO. 11 DRINKARD FIELD

- (A) Marathon Oil Company
PO Box 2409
Hobbs, NM 88240
- (B) Lou Worthan Well No. 11
Unit F, 1905' FNL & 2055' FWL
Section 11, T-22-S, R-37-E
Lea County, New Mexico
Commingle Zones: Tubb
Drinkard
- (C) A plat of the area is attached showing the lease and offset operations. Also attached is a C-102 for each formation.
- (D) The Form C-116 for each of the formations is attached. The allocated production for the Tubb will be based upon the current rate and the rate for the Drinkard will be based upon the pre-workover rates along with the historical production declines.
- (E) Production curves for both the Tubb and Drinkard are attached.
- (F) Estimated bottomhole pressure for each zone:
- | | |
|----------|----------|
| Tubb | 450 psia |
| Drinkard | 400 psia |
- (G) Marathon is commingling the fluids at the surface and has not encountered incompatibility problems.
- (H) If the downhole commingling is approved, the lost production and reserves of the Tubb will be recovered while maximizing recoveries from the Blinebry, preventing waste.

(I) Production from the latest GOR test as follows:

<u>FORMATION</u>	<u>OIL (bpd)</u>	<u>GAS (mcf/d)</u>	<u>WATER (bpd)</u>
Tubb	2.0	158	0.5
Drinkard*	<u>0.0</u>	<u>150</u>	<u>1.0</u>
TOTAL	<u>2.0</u>	<u>308</u>	<u>1.5</u>

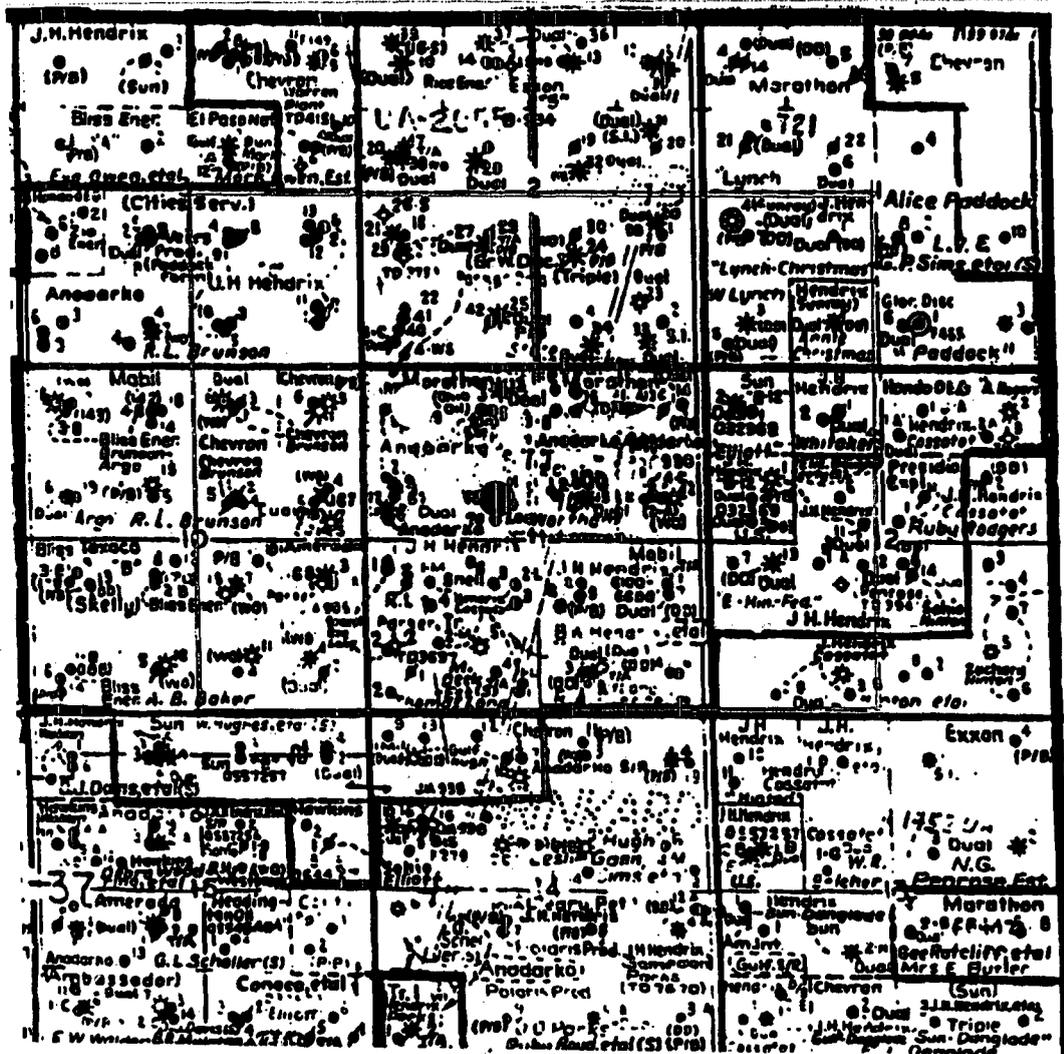
* Zone is currently TA. Rates are based upon production prior to a workover and estimated from offset production.

Allocated Percentages should be:

<u>FORMATION</u>	<u>OIL (%)</u>	<u>GAS (%)</u>	<u>WATER (%)</u>
Tubb	100.0	51.3	33.7
Drinkard	<u>0.0</u>	<u>48.7</u>	<u>66.3</u>
TOTAL	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

(J) Ownership of the two pools to be commingled are in common and correlative rights will not be violated.

(K) By copy of this letter, we are notifying all offset operators of the proposed commingling.



T
22
S

R 37 E

LAND PLAT

DRINKARD AREA

LEA COUNTY, NEW MEXICO

1" = 3000'

District I
 PO Box 1980, Hobbs, NM 88241-1980
 District II
 PO Drawer DD, Artesia, NM 88211-0719
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
 Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
 PO Box 2088
 Santa Fe, NM 87504-2088

Form C-10
 Revised February 10, 1991
 Instructions on back
 Submit to Appropriate District Office
 State Lease - 4 Copies
 Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-10220	² Pool Code	³ Pool Name Tubb
⁴ Property Code	⁵ Property Name Lou Worthan	⁶ Well Number 11
⁷ OGRID No. 14021	⁸ Operator Name Marathon Oil Company	⁹ Elevation 3359' GR

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	11	22-S	37-E		1905	North	2055	West	Lea

¹¹ 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

¹² Dedicated Acres 40	¹³ Joint or Infill N	¹⁴ Consolidation Code	¹⁵ 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

¹⁶ 	¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i> Signature Rick D. Gaddis Printed Name Production Engineer Title June 20, 1994 Date
	¹⁸ SURVEYOR CERTIFICATION <i>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.</i> Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

District I
 PO Box 1980, Hobbs, NM 88241-1980
 District II
 PO Drawer DD, Artesia, NM 88211-0719
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
 Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
 PO Box 2088
 Santa Fe, NM 87504-2088

Form C-10;
 Revised February 10, 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

1 AFI Number 30-025-10220		2 Pool Code		3 Pool Name Drinkard	
4 Property Code		5 Property Name Lou Worthan			6 Well Number 11
7 OGRID No. 14021		8 Operator Name Marathon Oil Company			9 Elevation 3359' GR

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	11	22-S	37-E		1905	North	2055	West	Lea

11 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

12 Dedicated Acres 40	13 Joint or Infill N	14 Consolidation Code	15 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

16 	11	17 OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i>
		Signature Rick D. Gaddis Printed Name Production Engineer Title June 20, 1994 Date
		18 SURVEYOR CERTIFICATION <i>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.</i>
		Date of Survey Signature and Seal of Professional Surveyor:
		Certificate Number

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

OIL CONSERVATION DIVISION

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

GAS - OIL RATIO TEST

Operator Marathon Oil Company		Pool Tubb		County Lea												
Address PO Box 2409		Hobbs, New Mexico		88240												
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	TYPE OF TEST - (X)	SCHEDULED	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.	
Lou Worthan	11	F	11	22S	37E	6/14/94	F	NA	100*	--	24	0	40	2	158	79,000
* Well on plunger lift.																

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.

Rick D. Gaddis
 Signature

Rick D. Gaddis, Production Engineer
 Printed name and title
 June 20, 1994
 Date
 (505) 393-7106
 Telephone No.

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

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

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

Form C-116
 Revised 1/1/89

GAS - OIL RATIO TEST

Operator Marathon Oil Company		Pool Drinkard		County Lea												
Address PO Box 2409 Hobbs, NM 88240		TYPE OF TEST - (X) <input checked="" type="checkbox"/> Scheduled <input type="checkbox"/> Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/>														
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	SUNITS	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 BBL.S.		
Lou Worthan	11	F	11	22S	37E	12/10/90	R	NA	30*	NA	24	1.0	NA	0.0	150	--

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.

Rick D. Gaddis

Signature

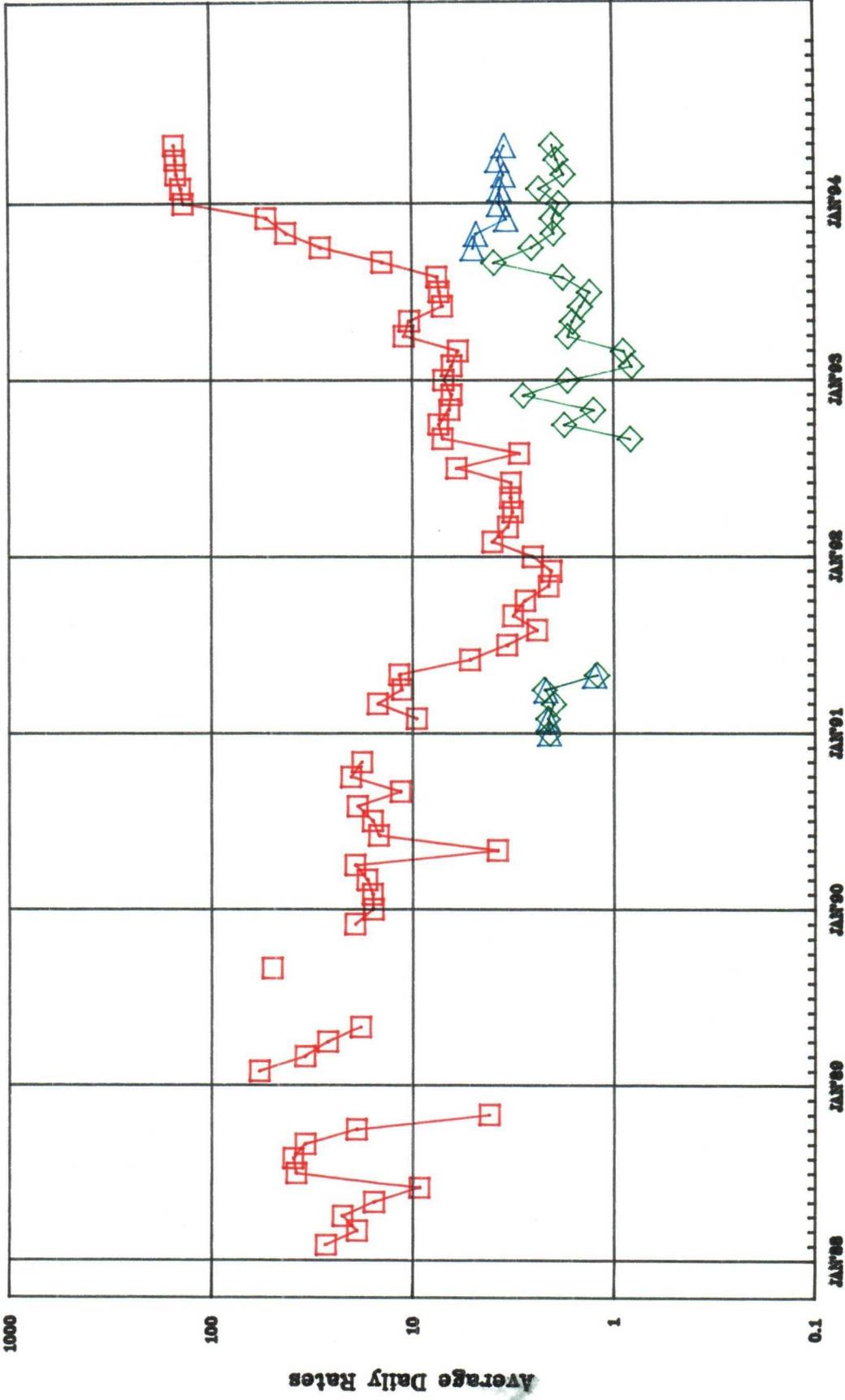
Rick D. Gaddis, Production Engineer

Printed name and title
 June 20, 1994 (505) 393-7106

Date Telephone No.

LOU WORTHAN WELL NO. 11

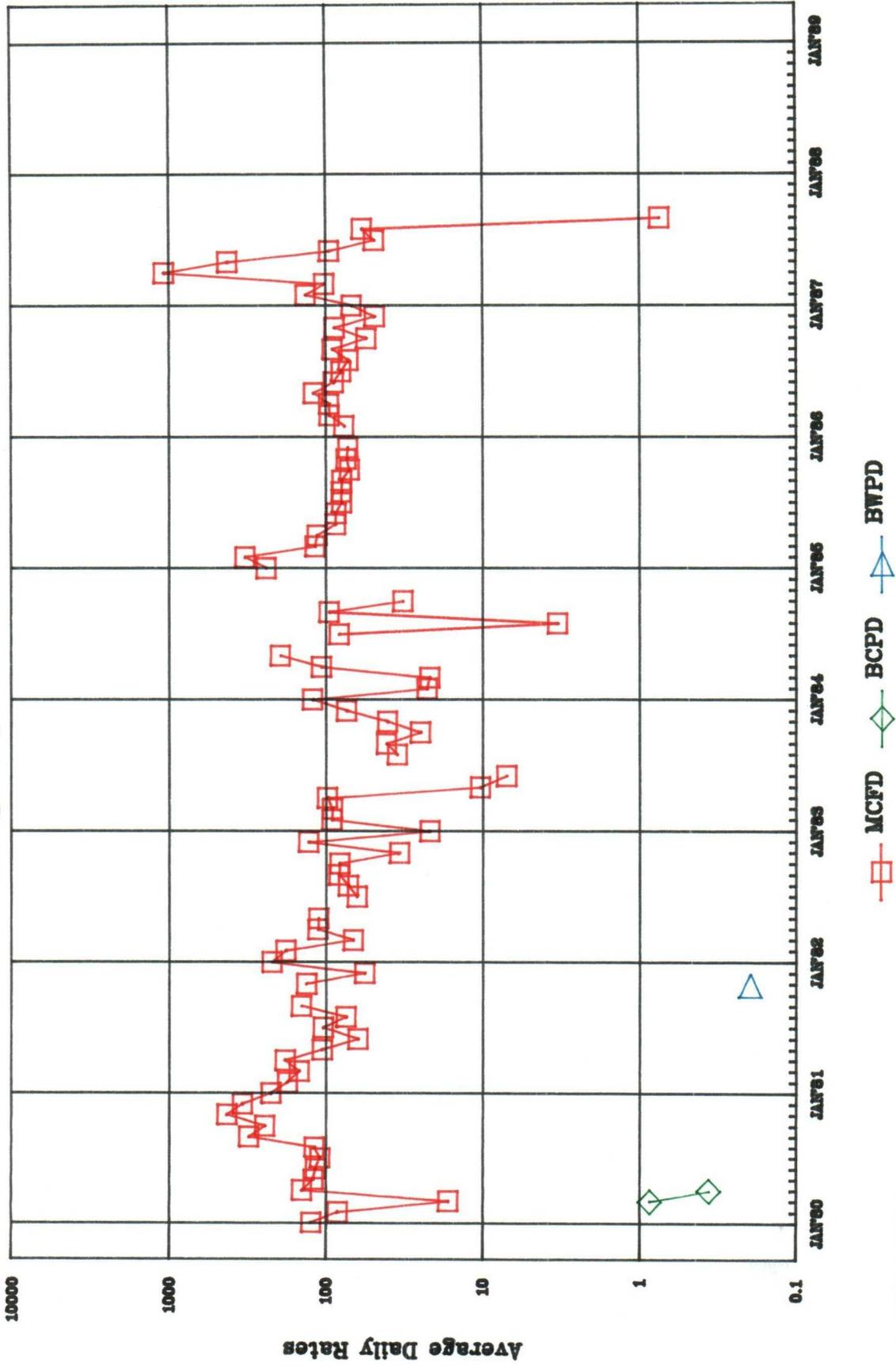
Average Daily Tubb Production Rates



MCFD BCPD BWPD

LOU WORTHAN WELL NO. 11

Average Daily Drinkard Production Rates





**Marathon
Oil Company**

P.O. Box 2409
Hobbs, NM 88241-2409
Telephone 505/393-7106

June 20, 1994

Offset Operators
Lou Worthan Well No. 11
(mailing list attached)

RE: **REQUEST FOR EXCEPTION TO RULE 303-A
DOWNHOLE COMMINGLING
MARATHON OIL COMPANY
LOU WORTHAN WELL NO. 11
UNIT F, 1905' FNL & 2055' FWL
SECTION 11, T-22-S, R-37-E
TUBB AND DRINKARD FORMATIONS
DRINKARD FIELD
LEA COUNTY, NEW MEXICO**

Gentlemen:

Marathon Oil Company has filed an application with the New Mexico Oil Conservation Division to downhole commingle the above captioned well. Enclosed, please find 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 return one copy to Marathon at the above address.

Sincerely,

A handwritten signature in cursive script, appearing to read 'T.A. Deines'.

T.A. Deines
Northwest Operations
Production Superintendent

RDG:TAD/9482/kc
Attachments

Agreed and accepted this _____ day of _____,
1994 by _____, as representative of

OFFSET OPERATORS

**LOU WORTHAN LEASE
Section 11, T-22-S, R-37-E
Lea County, New Mexico**

Exxon Company USA
PO Box 1600
Midland, TX 79702-1600
Attn: Land Department

Shell Western E&P
PO Box 576
Houston, TX 77001-0576
Attn: Land Department

Oxy USA Inc.
PO Box 50250
Midland, TX 79705-0250
Attn: Land Department

Southwest Royalties, Inc.
PO Drawer 11390
Midland, TX 79702-1390
Attn: Jon M. Tate

John H. Hendrix
223 West Wall, Suite 525
Midland, TX 79701

Chevron USA Inc.
PO Box 1150
Midland, TX 79702-1150
Attn: Land Department

American Exploration Co.
1331 Lamar, Suite 900
Houston, TX 77010-3086

Amerada Hess Corporation
1201 Louisiana, Suite 700
Houston, TX 77002
Attn: Randy Pharr

Mobile Expl. & Prod. US Inc.
PO Box 633
Midland, TX 79702-0633
Attn: Larry Coppedge

Texaco Expl. & Prod.
PO Box 3109
Midland, TX 79702-3109
Attn: Land Department

Shell Oil Company
PO Box 2463
Houston, TX 77252-2463
Attn: Land Department

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

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. 30-025-10220
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 Lou Worthan
2. Name of Operator Marathon Oil Company	8. Well No. 11
3. Address of Operator PO Box 2409 Hobbs, NM 88240	9. Pool name or Wildcat Tubb
4. Well Location Unit Letter <u>F</u> : <u>1905</u> Feet From The <u>North</u> Line and <u>2055</u> Feet From The <u>West</u> Line Section <u>11</u> Township <u>22-S</u> Range <u>37-E</u> NMPM Lea County	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3359' GR	

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 commingling</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.

Marathon Oil Company proposes the downhole commingling of the Tubb and Drinkard formations of the Lou Worthan Well No. 11. The Tubb currently produces 2 BOPD and 158 MCF. By drilling out a CIBP at 6180' (PBTD of 6157') and rod pumping both zones the Drinkard is expected to produce 150 MCFD with a combined rate of 2 BO, 308 MCFD and +/- 2 BWPD. This project will commence upon NMOCD approval of the downhole commingling request.

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

SIGNATURE *Rick D. Gaddis* TITLE Production Engineer DATE 6/20/94
 TYPE OR PRINT NAME Rick D. Gaddis TELEPHONE NO. (505) 393-7106

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____
 CONDITIONS OF APPROVAL, IF ANY:



OIL CONSERVATION DIVISION
RECEIVED

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

94 JUL 5 AM 8 50

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

6-27-94

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

BRUCE KING
GOVERNOR

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

DHC-1025

RE: Proposed:

- MC _____
- DHC _____
- NSL _____
- NSP _____
- SWD _____
- WFX _____
- PMX _____

Gentlemen:

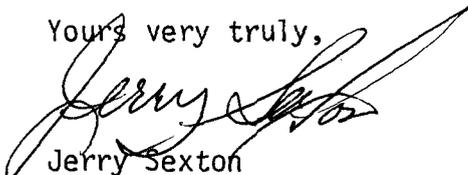
I have examined the application for the:

Marathon Oil Co Lou Wertham #11-F 11-22s-37e
 Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,


 Jerry Sexton
 Supervisor, District 1

/ed