

NSR 5/3/99

Houston Division
Production Operations, United States



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

April 12, 1999

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

APR 13 1999

**RE: Request for Exception to Rule 303-A
Downhole Commingling
Lou Worthan Well No. 14
Unit Letter A, 520' FNL & 330' FEL
Section 11, T-22-S, R-37-E
Tubb Oil & Gas, Drinkard and Wantz Abo Pools
Drinkard Field
Lea County, New Mexico**

**RE: Request for Exception to Rule 104
Application for Non-Standard Gas Well Location
and a Non-Standard Gas Proration Unit for the Tubb Oil & Gas Pool
Lou Worthan Well No. 14
Unit Letter A, 520' FNL & 330' FEL
Section 11, T-22-S, R-37-E
Lea County, New Mexico**

Dear Mr. Catanach:

Marathon Oil Company request administrative approval for an exception to Rule 303-A to permit the downhole commingling of production in the above subject well from the Tubb Oil & Gas, Drinkard and Wantz Abo pools in Lea County, New Mexico. The Tubb, Drinkard and Granite Wash have been downhole commingled since 1994 (DHC-1019). Marathon petition to amend the existing DHC order to exclude the Granite Wash and add the Abo. If the actual production allocation percentages are significantly different that the estimated ones used in this application, Marathon will reapply with the correct allocation percentages.

Marathon Oil Company respectfully request authorization for a 40 acre Non-Standard Gas Proration Unit for the Tubb Oil & Gas Pool Production. This proposed proration unit will be comprised of the NE portion of the NE/4 of Section 11, T-22-S, R-37-E in Lea County, New Mexico. The gas proration unit will be for Lou Worthan Well No. 14 (API No. 30-025-25255) in the Tubb Oil & Gas pool. This well is flanked on the West and South by Tubb oil wells and Marathon does not have the acreage to the East or North.

Marathon Oil Company request administrative approval for a Non-Standard Gas Well Location for the Tubb Oil & Gas Pool Production. This Tubb well had been an oil well since 1987, but due to an increase in the Gas-Oil-Ratio it has become a gas well. The well location does not conform to a standard gas well location, thus a need for a non-standard location order is needed to continue to produce this pool.

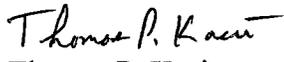
Marathon Oil Company request to reclassify the Tubb Oil & Gas and Drinkard zones for Lou Worthan Well No. 14, from an oil well to a gas well. Due to the recent increase in Gas-Oil-Ratio for these two pools, they now have a Gas-Oil Ratio that indicates that they are now producing as a gas well.

The Lou Worthan Well No. 14 was drilled and completed in 1976 as a Granite Wash oil well. In 1978, it was dually completed in the Granite Wash (oil) and Drinkard (gas). A single Tubb (oil) completion was performed in 1987, thus abandoning the Granite Wash and Drinkard. The Tubb, Drinkard and Granite Wash were downhole commingled in 1994 (DHC-1019). Currently the well is being completed in the Abo. The Abo is expected to be a marginal gas producer. By downhole commingling the production from the three zones, production will be realized that could not economically justify the cost of equipment to separate the zones. Rod pumping equipment will be utilized to keep the PBHP as low as possible, preventing crossflow when producing.

Marathon also request a 30 day exception to Rule 303-A and Rule 104 to permit the downhole commingling of production while awaiting for approval of application. If application is not approved, then the well will be worked over to comply with approved NMOCD regulations.

Enclosed is pertinent data supporting this application as outlined in Rule 303-A and Rule 104. If additional information is necessary, please contact me at (505) 393-7106, ext 201.

Sincerely,


Thomas P. Kacir
Production Engineer

Enclosure

REQUEST FOR EXCEPTION TO RULE 303-A

Lou Worthan Well No. 14

Drinkard Field

A: Operator

Marathon Oil Company
P.O. Box 2490
Hobbs, New Mexico 88241

B: Lease Name and Well Number

Lou Worthan Well No. 14
Unit Letter "A", 520' FNL & 330' FEL
Section 11, T-22-S, R-37-E
Lea County, New Mexico
Drinkard: Tubb Oil & Gas, Drinkard, Wantz Abo Pools

C: Plats and Offset Operators

Attached

D: C-116's

Attached

E: Production Decline Curves

Attached

F: Estimated Bottomhole Pressures

	Current	Original
Tubb Oil & Gas	350 psi	1800 psi
Drinkard	450 psi	2000 psi
Wantz Abo	600 psi	2400 psi

G: Product Characteristics

Previous commingling of these zones by Marathon and other operators in this area have shown that the produced fluids are compatible and commingling will not cause formation damage.

H: Value

Marathon receives the same price for product from these zones and value will not be adversely affected.

I: Production Allocation

<u>POOL</u>	<u>BOPD</u>	<u>MCFD</u>	<u>BWPD</u>	<u>Estimated Methods</u>
Tubb Oil & Gas	1.4	222	3.0	Pre-Workover Production
Drinkard	0.0	46	0.0	Pre-Workover Production
Wantz Abo	<u>1.6</u>	<u>211</u>	<u>2.5</u>	Estimated Post Workover
Total	3.0	479	5.5	

<u>Allocated Percentages</u>	<u>Oil %</u>	<u>Gas %</u>	<u>Water %</u>
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Pre-workover Administrative Order No. DHC-1019

Tubb Oil & Gas	45	68	50
Drinkard	0	14	0
Wantz Abo	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
Total	100	100	100

Post-workover utilizing above production

Tubb Oil & Gas	47	46	55
Drinkard	0	10	0
Wantz Abo	<u>53</u>	<u>44</u>	<u>45</u>
Total	100	100	100

J: Ownership

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

K: Offset Operator Notification

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

OFFSETTING OPERATORS

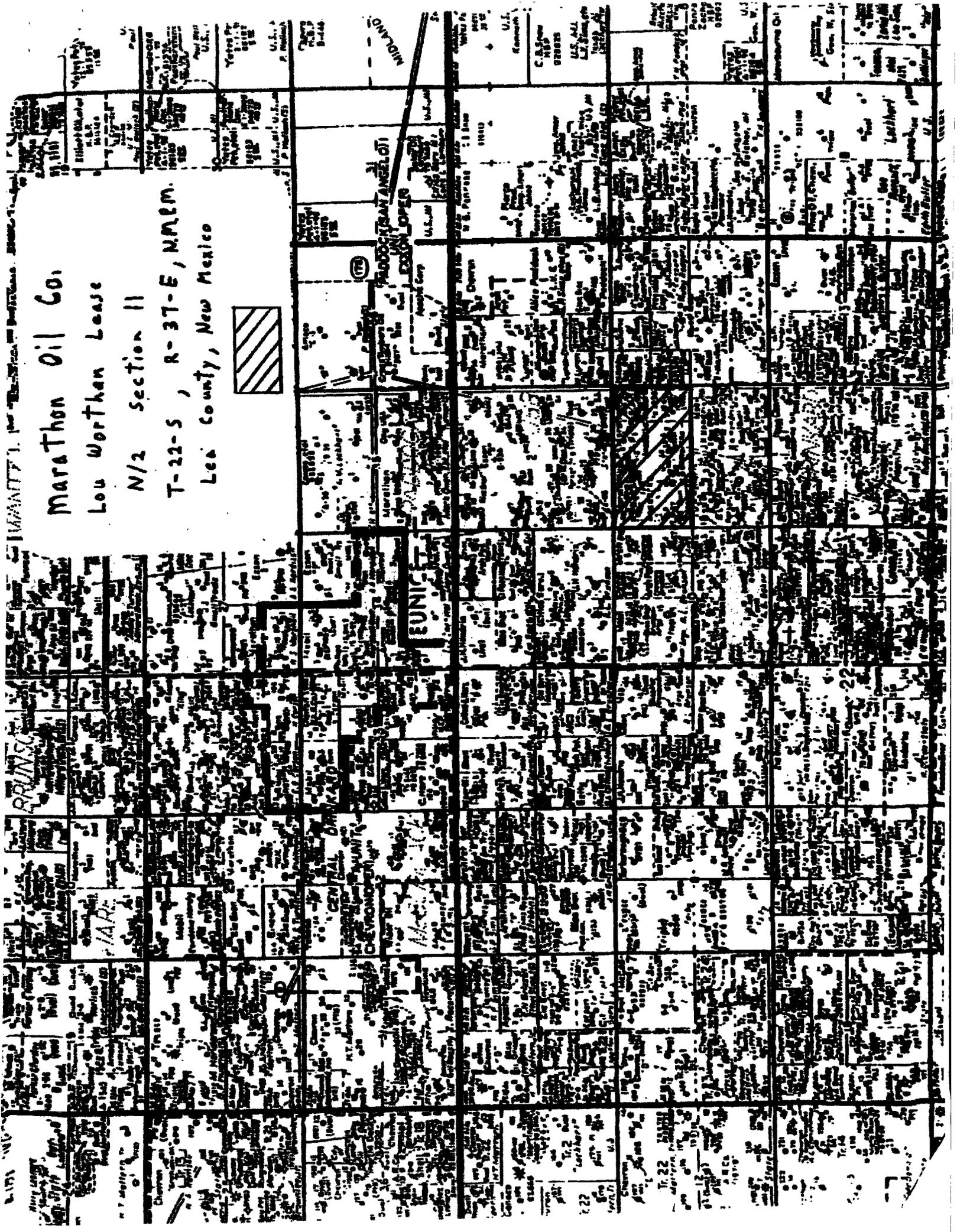
**Lou Worthan Well No. 14
UL "A", 520' FNL, 330' FEL
Section 11, T-22-S, R-37-E
Lea County, New Mexico
Drinkard Field**

Section 1: John H. Hendrix Corporation
P. O. Box 3040
Midland, Texas 79702-3040

Section 2: Exxon Corporation
P.O. Box 4697
Houston, Texas 77210-4697

Section 11: Marathon Oil Company

Section 12: John H. Hendrix Corporation



Marathon Oil Co.

Lou Worthen Lease

N/2 Section 11

T-22-S, R-37-E, N.M.P.M.

Lea County, New Mexico



ADOLFO (ANTONIO) LOPEZ

UNION

CHEVROLEN

CENTRAL BANK

MIDLAND

[The map contains numerous small, illegible text annotations throughout the grid, including names, dates, and legal descriptions.]

Houston Division
Production Operations, United States



**Marathon
Oil Company**

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

April 12, 1999

Exxon Corporation
P. O. Box 4697
Houston, Texas 77210-4697

**RE: Request for Exception to Rule 303-A
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Lou Worthan Well No. 14
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Section 11, T-22-S, R-37-E
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and a Non-Standard Gas Proration Unit for the Tubb Oil & Gas Pool
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Unit Letter A, 520' FNL & 330' FEL
Section 11, T-22-S, R-37-E
Lea County, New Mexico**

Ladies and/or Gentlemen:

Marathon Oil Company has filed an application with the New Mexico Oil Conservation division to down-hole commingle the Tubb, Drinkard and Abo. We also filed for a non-standard proration unit & location for the Tubb pool. Please find enclosed a copy of the application.

If you are in agreement and waive all objections to the above listed applications, 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 cursive script that reads "Thomas P. Kacir".

Thomas P. Kacir
Production Engineer

TPK/
Enclosure

Agreed and accepted this _____ day of _____ 1999

by _____, as representative of

Houston Division
Production Operations, United States



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

April 12, 1999

John H. Hendrix Corporation
P. O. Box 3040
Midland, Texas 79702-3040

RE: **Request for Exception to Rule 303-A**
Downhole Commingling
Lou Worthan Well No. 14
Unit Letter A, 520' FNL & 330' FEL
Section 11, T-22-S, R-37-E
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Sincerely,


Thomas P. Kacir
Production Engineer

TPK/
Enclosure

Agreed and accepted this _____ day of _____ 1999

by _____, as representative of _____

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

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

GAS - OIL RATIO TEST

Operator		Pool		County											
Marathon Oil Company		Tubb Oil & Gas / Drinkard		Lea											
Address		TYPE OF TEST - (X)	Scheduled <input type="checkbox"/>	Completion <input type="checkbox"/>	Special <input checked="" type="checkbox"/>										
P.O. Box 2490 Hobbs, NM 88241		WELL NO.	LOCATION			LENGTH OF TEST HOURS	WATER BBL'S.	GRAV. OIL	OIL BBL'S.	GAS M.C.F.	GAS-OIL RATIO CU.FT/BBL				
			U	S	T							R			
Lou Worthan		14	A	11	22S	37E	03/06/99	P	200	24	6.0	3.0	3.0	326	108,667
DHC #1019 X 011 X Gas															
Tubb (011) 45 68															
Drinkard 0 14															
Granite Wash 55 18															
<i>For Information only</i>															

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

Thomas P. Kacir
Signature

Thomas P. Kacir Production Engineer
Printed name and title

4-12-99 505-393-7106
Date Telephone No.

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.)

District I
 PO Box 1980, Hobbs, NM 88241-1980
 District II
 811 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

State of New Mexico
 Energy, Minerals & Natural Resources Department

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

¹ API Number 30-025-25255		² Pool Code 86440		³ Pool Name Tubb Oil & Gas (Gas)	
⁴ Property Code 006488		⁵ Property Name Lou Worthan			⁶ Well Number 14
⁷ OGRID No. 14021		⁸ Operator Name Marathon Oil Company			⁹ Elevation 3350' GL

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
A	11	22-S	37-E		520	North	330	East	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	¹⁴ Consolidation Code	¹⁵ Order No. DHC-1019
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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

	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: <u>Thomas P. Kacir</u> Printed Name: <u>Thomas P. Kacir</u> Title: <u>Production Engineer</u> Date: <u>4-12-99</u>	
Lease Boundary	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 Surveyer: _____ Certificate Number: _____	

State of New Mexico

Energy, Minerals & Natural Resources Department

Form C-102

Revised October 18, 1994

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 S. 1st Street, Artesia, NM 88210-2834
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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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-25255	² Pool Code 19190	³ Pool Name Drinkard
⁴ Property Code 006488	⁵ Property Name Lou Worthan	
⁷ OGRID No. 14021	⁸ Operator Name Marathon Oil Company	⁶ Well Number 14
		⁹ Elevation 3350' GL

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
A	11	22-S	37-E		520	North	330	East	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	¹⁴ Consolidation Code	¹⁵ Order No. DHC-1019
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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

	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Thomas P. Kacir Signature Thomas P. Kacir Printed Name Production Engineer Title 4-12-99 Date
	¹⁸ 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. Date of Survey Signature and Seal of Professional Surveyer: Certificate Number
Lou Worthan #16 30-025-25383 330' EWL - 1980' FEL Tubbs Oil Company	Lease Boundary Lou Worthan #18 190' EWL - 860' FEL Tubbs Oil Comp.

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

State of New Mexico
 Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
 2040 South Pacheco
 Santa Fe, NM 87505

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AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-25255		² Pool Code 62700		³ Pool Name Wantz Abo	
⁴ Property Code 006488		⁵ Property Name Lou Worthan			⁶ Well Number 14
⁷ OGRID No. 14021		⁸ Operator Name Marathon Oil Company			⁹ Elevation 3350' GL

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
A	11	22-S	37-E		520	North	330	East	Lea

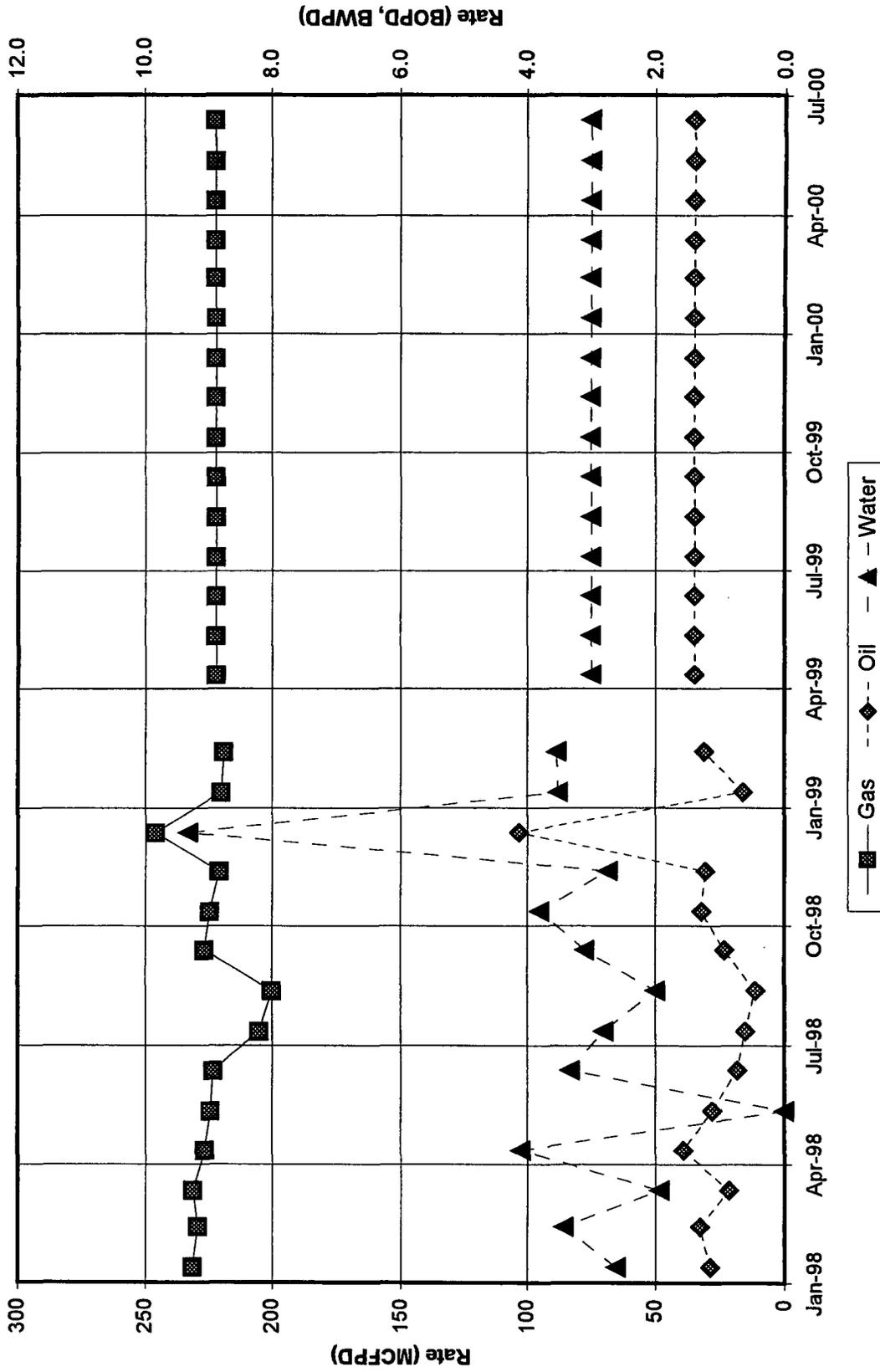
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County

¹² Dedicated Acres 40	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. DHC-1019
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	<p>¹⁷ 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>Thomas P. Kacir</i> Signature Thomas P. Kacir Printed Name Production Engineer Title 4-12-99 Date</p>
<p>Lease Boundary</p>	<p>_____ Certificate Number</p>

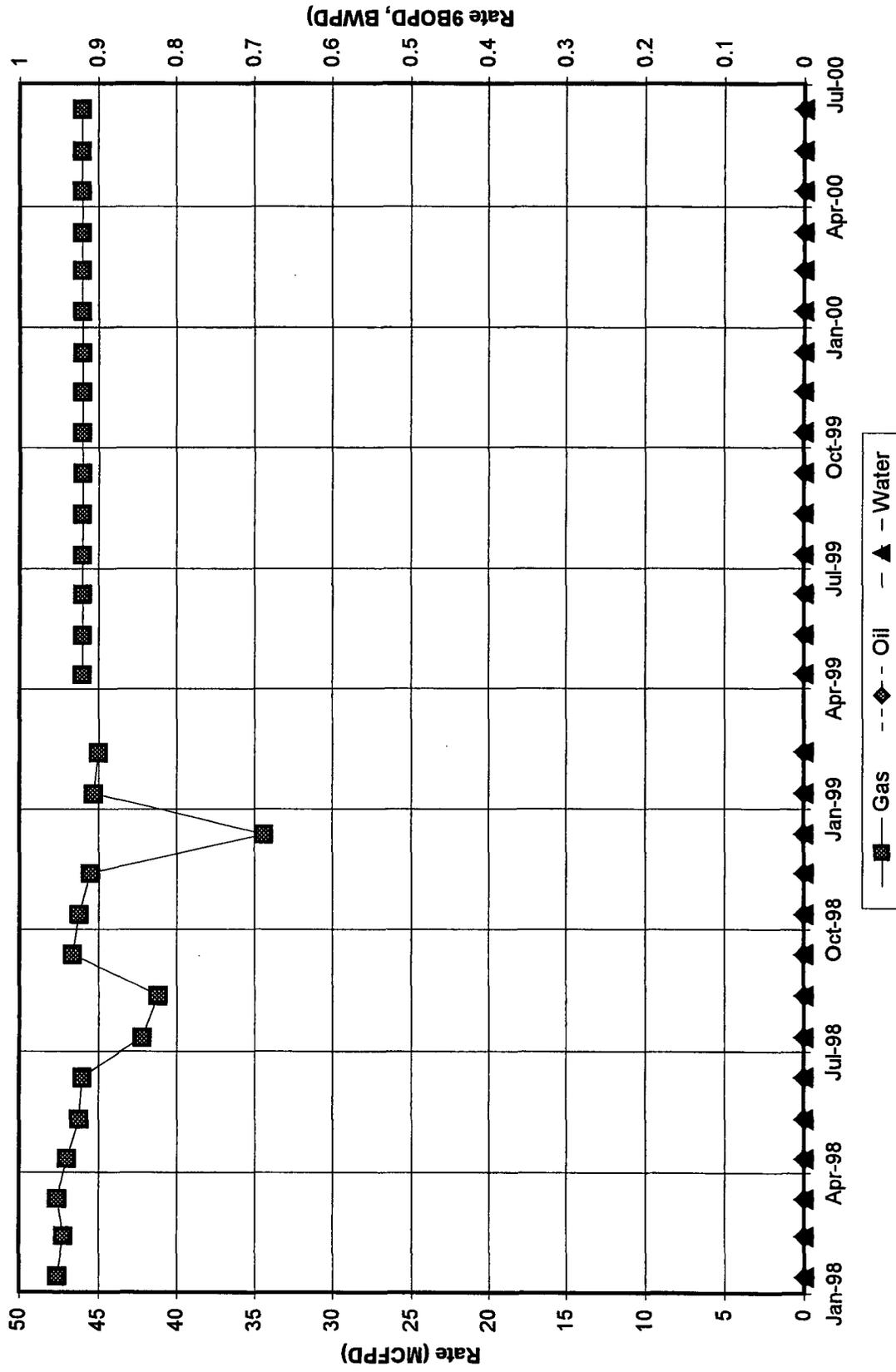
**Lou Worthan Well No. 14
Tubb Oil & Gas Pool Production**



Sec 11, T-22-S, R-37-E
520' FNL, 330' FEL

Tubb, Drinkard, Abo
DHC Application

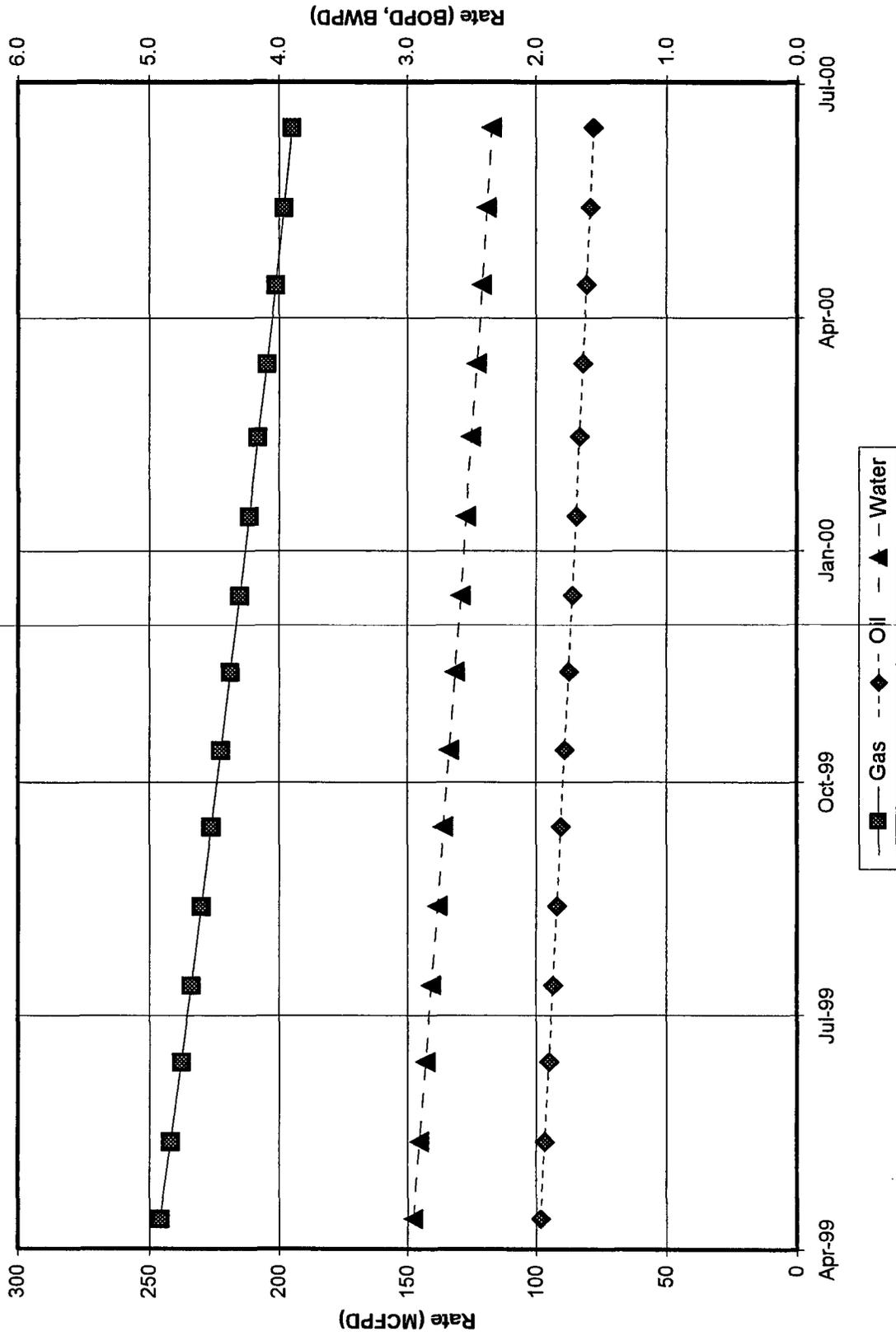
**Lou Worthan Well No. 14
Drinkard Pool Production**



Sec 11, T-22-S, R-37-E
520' FNL, 330' FEL

Tubb, Drinkard, Abo
DHC Application

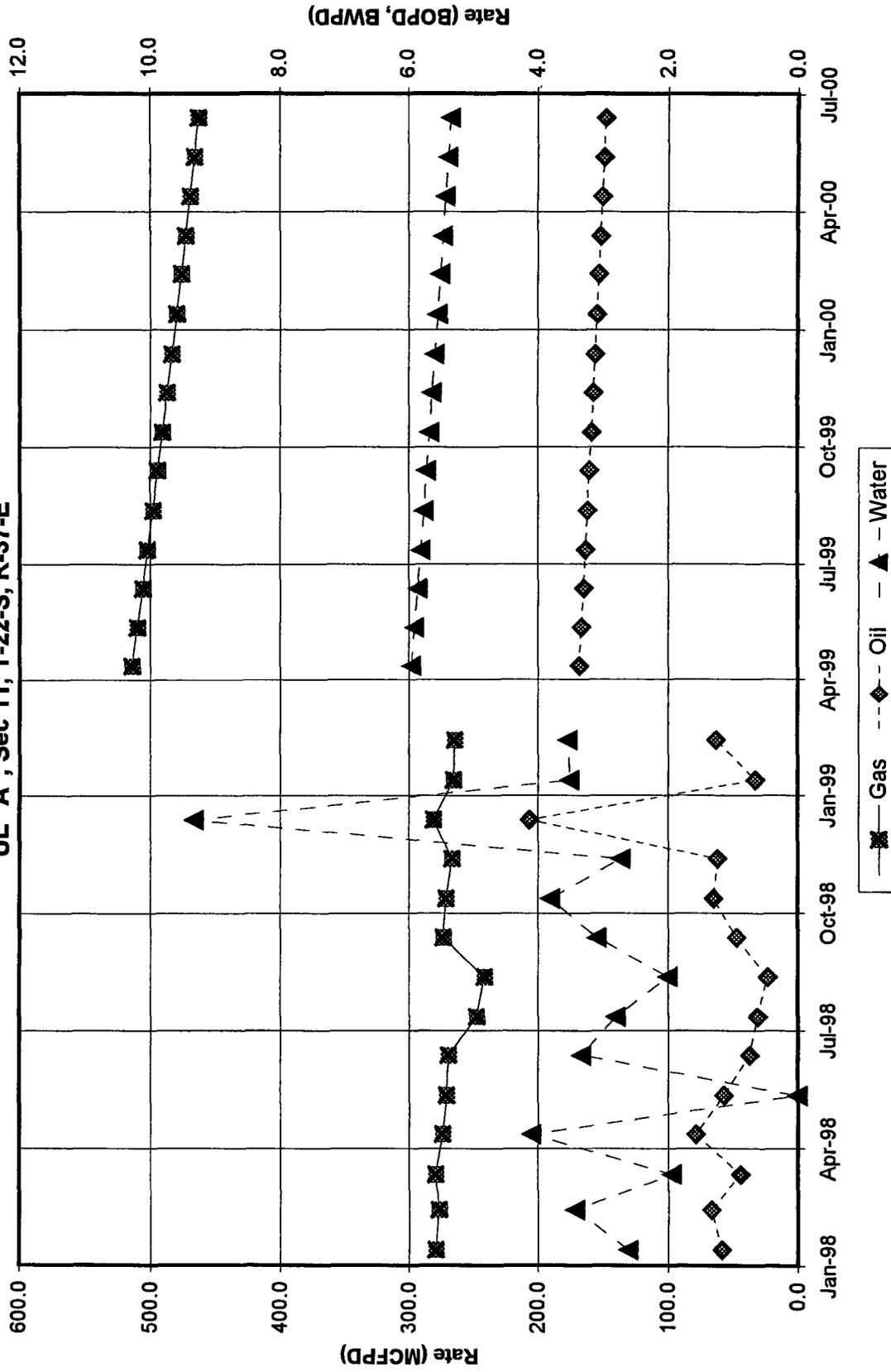
**Lou Worthan Well No. 14
Abo Pool Production**



Sec 11, T-22-S, R-37-E
520' FNL, 330' FEL

Tubb, Drinkard, Abo
DHC Application

Lou Worthan #14
Total Expected Production
UL "A", Sec 11, T-22-S, R-37-E



Sec 11, T-22-S, R-37-E
 520' FNL, 330' FEL

Tubb, Drinkard, Abo
 DHC Application

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

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

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

APPROVAL PROCESS:

Administrative Hearing

EXISTING WELLBORE

YES NO

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Marathon Oil Company Address PO Box 2490 Hobbs, NM 88240

Case Lou Worthan Well No. 14 Unit Cr. - Sec - Twp - Rge UL A, Sec.11, T-22-S, R-37-E County Lea

OGRID NO. 14021 Property Code 6488 API NO. 30-025-25255 Spacing Unit Lease Types: (check 1 or more)
Federal State Landlord Fee

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zones	Lower Zone
1. Pool Name and Pool Code	Tubb Oil & Gas 86440	Drinkard 19190	Wantz Abo 62700
2. Top and Bottom of Pay Section (Perforations)	5788 - 5898'	6224 - 6294'	6556 - 7055'
3. Type of production (Oil or Gas)	Gas	Gas	Gas
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) 350	a. 450 psi	a. 600 psi
	b. (Original) 1800	b. 2000 psi	b. 2400 psi
6. Oil Gravity (°API) or Gas BTU Content	1225	1240	1268
7. Producing or Shut-In?	Producing	Producing	SI
Production Marginal? (yes or no)	Yes	Yes	Expected - 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	Date: Rates: N/A	Date: Rates: N/A	Date: Estimated Rates: 1.6/211/2.5
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 3/6/99 Rates: 1.4/222/3	Date: 3/6/99 Rates: 0/46/0	Date: Rates: N/A
8. Fixed Percentage Allocation Formula - % for each zone	Oil: 47 % Gas: 46 %	Oil: 0 % Gas: 10 %	Oil: 53 % Gas: 44 %

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 N/A

15. NMOCD Reference Cases for Rule 303(C) Exceptions: ORDER NO(S). DHC No. 1019

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 Thomas P. Kacir TITLE Production Eng. DATE 4/12/99

TYPE OR PRINT NAME Thomas P. Kacir TELEPHONE NO. (505) 393-7106