

DHC

7/1/97

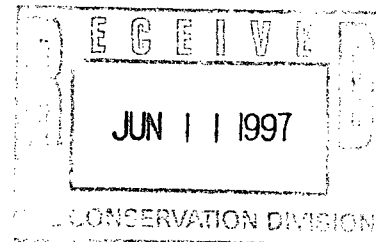
Mid-Continent Region
Production United States



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

June 9, 1997

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



RE: **Request for Exception to Rule 303-A**
Downhole Commingling
Lou Worthan Well No. 13
Unit Letter C, 330' FNL & 2080' FWL
Section 11, T-22-S, R-37-E
Drinkard and Wantz Abo Pools
Drinkard 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 Drinkard, Wantz Abo pools in Lea County, New Mexico.

Approval was received to downhole commingle (DHC- 884) the Drinkard, Wantz Abo and Wantz Granite Wash last month (May). Due to the well producing above expectations we do not want to pull the bridge plug at this time, but request to temporarily amend the existing downhole commingling permit as stated in paragraph one. When production diminishes to a lower level we would want to go in and pull the bridge plug to downhole commingle the three zones.

The Drinkard and Granite Wash have been downhole commingled since April 1993 and are reaching the producible economic limit. A recent workover isolated the Granite Wash below a bridge plug. Next pay was added in the Drinkard and Abo zones. Currently production is from only the Drinkard and Abo. By downhole commingling the production from the two 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.

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

Sincerely,

A handwritten signature of Thomas P. Kacir.

Thomas P. Kacir
Production Engineer

TPK/dbc
Enclosure

REQUEST FOR EXCEPTION TO RULE 303-A

Lou Worthan Well No. 13

Drinkard Field

A: Operator

Marathon Oil Company
P.O. Box 2409
Hobbs, New Mexico 88240-2409

B: Lease Name and Well Number

Lou Worthan Well No. 13
Unit Letter C, 330' FNL & 2080' FWL
Section 11, T-22-S, R-37-E
Lea County, New Mexico
Drinkard: 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 (mid 1970's)
Drinkard	350 psi	1870 psi
Wantz Abo	630 psi	2140 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>
Drinkard	0.4	102	1.9	Post Workover Production
Wantz Abo	<u>3.6</u>	<u>624</u>	<u>2.1</u>	Post Workover Production
Total	4.0	726	4.0	

Drinkard and Abo liquid rates are based upon swab and flowing tests during the workover.

<u>Allocated Percentages</u>	<u>Oil %</u>	<u>Gas %</u>	<u>Water %</u>
Pre-workover Administrative Order No. DHC-884			
Drinkard	0	25	0
Wantz Abo	N/A	N/A	N/A
Wantz Granite Wash	<u>100</u>	<u>75</u>	<u>100</u>
Total	100	100	100

Post-workover utilizing above production


Drinkard	10	14	47.5
Wantz Abo	<u>90</u>	<u>86</u>	<u>52.5</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.



BLK. A-39

T 225

Drinkard Field
Lea County, N.M.

1 Mile

Map showing the Drinkard Field in Lea County, N.M., with various well locations and names. The map includes a scale bar indicating 1 mile. The field is divided into several sections, each containing numerous well names and their corresponding owners. The names are arranged in a grid-like pattern, with some sections labeled with numbers (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). The names of the wells and owners are listed in a small, dense font within each section. The map also shows the location of the Drinkard Field relative to the Lea County, N.M. boundary.

OFFSETTING OPERATORS
Lou Worthan Well No. 13
UL "C", 330' FNL, 2080' FWL
Section 11, T-22-S, R-37-E
Lea County, New Mexico
Drinkard Field

Exxon Corporation
P.O. Box 1600
Midland, Texas 79702

John H. Hendrix Corp.
223 West Wall, Ste. 525
Midland, Texas 79701

Oxy USA Inc.
P.O. Box 50250
Midland, Texas 79705

Texaco Exploration and Production Company, Inc.
P.O. Box 3109
Midland, Texas 79702

Chevron USA Inc.
P.O. Box 1150
Midland, Texas 79702

Collins and Ware
508 W. Wall, Ste. 1200
Midland, Texas 79701

Titan Resources I Incorporated
500 W. Texas, Ste. 500
Midland, Texas 79701

Mid-Continent Region
Production United States



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

June 6, 1997

Chevron USA Inc.
P.O. Box 1150
Midland, Texas 79702

RE: **Request for Exception to Rule 303-A**
Downhole Commingling
Lou Worthan Well No. 13
Unit Letter C, 330' FNL & 2080' FWL
Section 11, T-22-S, R-37-E
Drinkard and Wantz Abo Pools
Drinkard Field
Lea County, New Mexico

Ladies and/or Gentlemen:

Marathon Oil Company has filed an application with the New Mexico Oil Conservation division to amend the downhole commingling production permit in 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 cursive script that reads 'Thomas P. Kacir'.

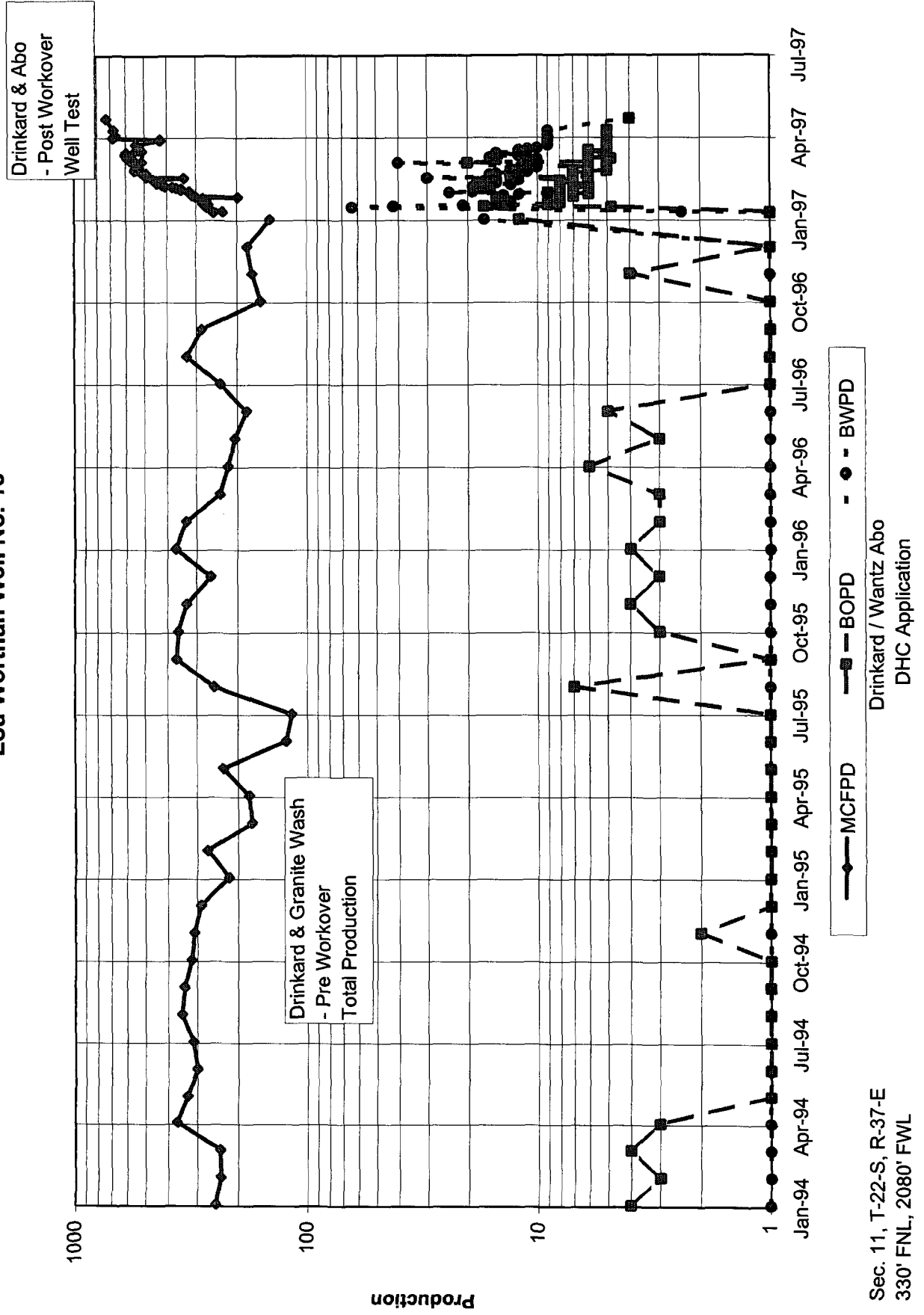
Thomas P. Kacir
Production Engineer

TPK/
Enclosure

Agreed and accepted this _____ day of _____ 1997

by _____, as representative of

Lou Worthan Well No. 13



Sec. 11, T-22-S, R-37-E
330' FNL, 2080' FWL

Submit 2 copies to Appropriate
District Office.
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
311 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 Drinkard / Wantz 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	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS-OIL RATIO CU.FT./BBL
		U	S	T						R	WATER BBL'S.	GRAV. OIL	
Lou Worthan	13	C	11	22	37	5/5/97		Csg75		24	4		181,500
Zone 011X GasX													
Drinkard 10 14										1.9		0.4	255,000
Wantz Abo 90 86										2.1		3.6	173,333
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.

Tom P. Kacir
Signature

Tom P. Kacir Production Engineer

Printed name and title

June 9, 1997

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 February 10, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

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
PO Box 2088, Santa Fe, NM 87504-2088

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-24943	² Pool Code 19190	³ Pool Name Drinkard Gas
⁴ Property Code 6488	⁵ Property Name Lou Worthan	⁶ Well Number 13
⁷ OGRID No. 014021	⁸ Operator Name Marathon Oil Company	⁹ Elevation 3362'

¹⁰ Surface Location

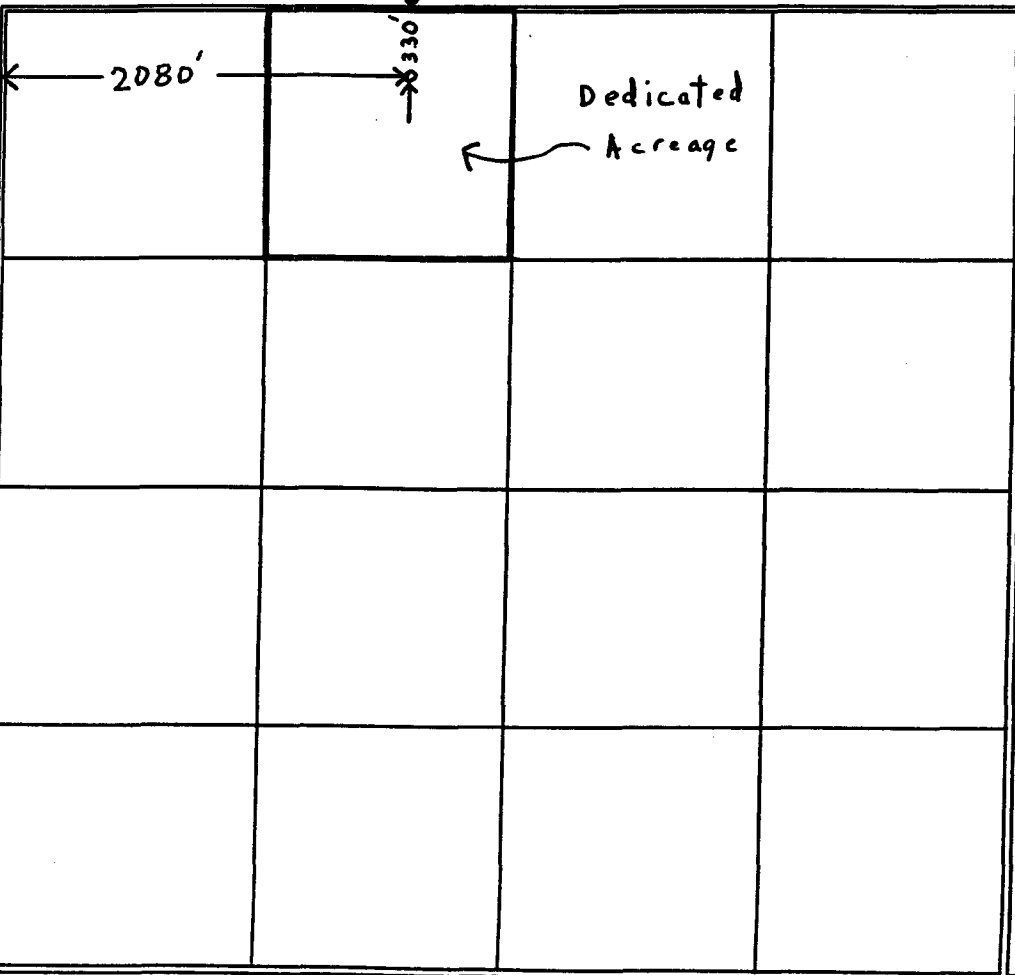
UL or lot no. C	Section 11	Township 22-S	Range 37-E	Lot. Idn	Feet from the 330	North/South Line North	Feet from the 2080	East/West line West	County Lea
---------------------------	----------------------	-------------------------	----------------------	----------	-----------------------------	----------------------------------	------------------------------	-------------------------------	----------------------

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 Y	¹⁴ Consolidation Code NA	¹⁵ Order No. NA
--	---	---	--------------------------------------

**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**

	<p>¹⁷ OPERATOR CERTIFICATION</p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p><u>Thomas P. Kacir</u></p> <p>Signature</p> <p>Thomas P. Kacir</p> <p>Printed Name</p> <p>Production Engineer</p> <p>Title</p> <p>4/11/97</p> <p>Date</p>
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p><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></p> <p>_____</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>_____</p> <p>Certificate Number</p>

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102

Revised February 10, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

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
PO Box 2088, Santa Fe, NM 87504-2088

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-24943		² Pool Code 62700		³ Pool Name Wantz Abo Gas	
⁴ Property Code 6488		⁵ Property Name Lou Worthan			⁶ Well Number 13
⁷ OGRID No. 014021		⁸ Operator Name Marathon Oil Company			⁹ Elevation 3362'

¹⁰ Surface Location									
UL or lot no. C	Section 11	Township 22-S	Range 37-E	Lot. Idn	Feet from the 330	North/South Line North	Feet from the 2080	East/West line West	County 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 Y		¹⁴ Consolidation Code NA		¹⁵ Order No. NA			

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.		
	Signature 		
	Printed Name Thomas P. Kacir Title Production Engineer Date 4/11/97		
	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 Surveyor: 		
	Certificate Number 		

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 87505-6429Form C-107-A
New 3-12-96

APPROVAL PROCESS:

☐ Administrative ☐ Hearing

EXISTING WELLBORE

☐ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Marathon Oil Company Address PO Box 2409 Hobbs, NM 88241
Lease Lou Worthan Well No. 13 C. Sec. 11, T-22-S, R-37-E Lea County
OGRID NO. 014021 Property Code 6488 API NO. 30-025-24943 Federal ☐ State ☒ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zones	Intermediate Zones	Lower Zone
1. Pool Name and Pool Code	Drinkard 19190	Wantz Abo 62700	
2. Top and Bottom of Pay Section (Perforations)	6244-6471'	6564-7070'	
3. Type of production (Oil or Gas)	Gas	Gas	
4. Method of Production (Flowing or 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 psi b. (Original) 1870 psi	a. 630 psi b. 2140 psi	a. b.
6. Oil Gravity (°API) or Gas BTU Content	1272	1246	
7. Producing or Shut-In?	Producing	Producing	
Production Marginal? (yes or no)	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	Date: Rates:	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 5/5/97 Rates: 0.4/102/1.9	Date: 5/5/97 Rates: 3.6/624/2.1	Date: Rates:
8. Fixed Percentage Allocation Formula - % for each zone	Oil: 10 % Gas: 14 %	Oil: 90 % Gas: 86 %	Oil: % Gas: %

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 ☐ No11. 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 ☐ No13. 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 ☐ No15. NMOC Reference Cases for Rule 303(C) Exceptions: ORDER NO(S). DHC No. 884

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 6/9/97TYPE OR PRINT NAME Thomas P. Kacir TELEPHONE NO. (505) 393-7106

DHC 884

CW

Mid-Continent Region
Production United States



**Marathon
Oil Company**

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

June 6, 1997

Titan Resources Incorporated
500 W. Texas Ste. 500
Midland, Texas 79701

RE: **Request for Exception to Rule 303-A**
Downhole Commingling
Lou Worthan Well No. 13
Unit Letter C, 330' FNL & 2080' FWL
Section 11, T-22-S, R-37-E
Drinkard and Wantz Abo Pools
Drinkard Field
Lea County, New Mexico

Ladies and/or Gentlemen:

Marathon Oil Company has filed an application with the New Mexico Oil Conservation division to amend the downhole commingling production permit in 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,

Thomas P. Kacir

Thomas P. Kacir
Production Engineer

TPK/
Enclosure

Agreed and accepted this 13 day of June 1997
by *[Signature]* VP/ENG, as representative of
TITAN RESOURCES, Inc.