



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE

6-8-94

BRUCE KING  
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

T-12-1017 6/28/94

RE: Proposed:

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

Gentlemen:

I have examined the application for the:

|                         |                    |              |                   |
|-------------------------|--------------------|--------------|-------------------|
| <u>Marathon Oil Co.</u> | <u>Lou Worthan</u> | <u>#10-D</u> | <u>11-225-37E</u> |
| Operator                | Lease & Well No.   | Unit         | S-T-R             |

and my recommendations are as follows:

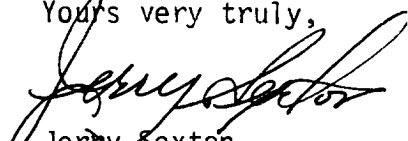
water too much for administrative approval

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Yours very truly,

  
Jerry Sexton  
Supervisor, District 1

/ed

Houston Division  
Production Operations, United States



**Marathon  
Oil Company**

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

May 23, 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. 10  
UNIT D, 585' FNL & 660' 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 rod pumped. The Drinkard is isolated below a CIBP (see attached wellbore sketch). It is proposed to drill out the CIBP, downhole commingle the Tubb and Drinkard, and rod pump both zones. This method of producing the well will ensure maximum drawdown on each formation and recover additional reserves from the Drinkard and produce both zones to a lower depletion pressure thus minimizing 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 that reads 'S. P. Guidry'.

S.P. Guidry  
Northwest Operations  
Production Superintendent

RDG:SPG/9455/kc

Attachments

# **REQUEST FOR EXCEPTION TO RULE 303-A**

## **LOU WORTHAN WELL NO. 10 DRINKARD FIELD**

- (A) Marathon Oil Company  
PO Box 2409  
Hobbs, NM 88240
- (B) Lou Worthan Well No. 10  
Unit D, 585' FNL and 660' FWL  
Section 11, T-22-S, R-37-E  
Lea County, New Mexico  
Commingling 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 each pool will be based upon the current and historical production declines along with the latest GOR tests.
- (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, additional reserves will be recovered from the Drinkard while maximizing recoveries from the Tubb.

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JUN 17 1994

JOHN HENRY  
OFFICE

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

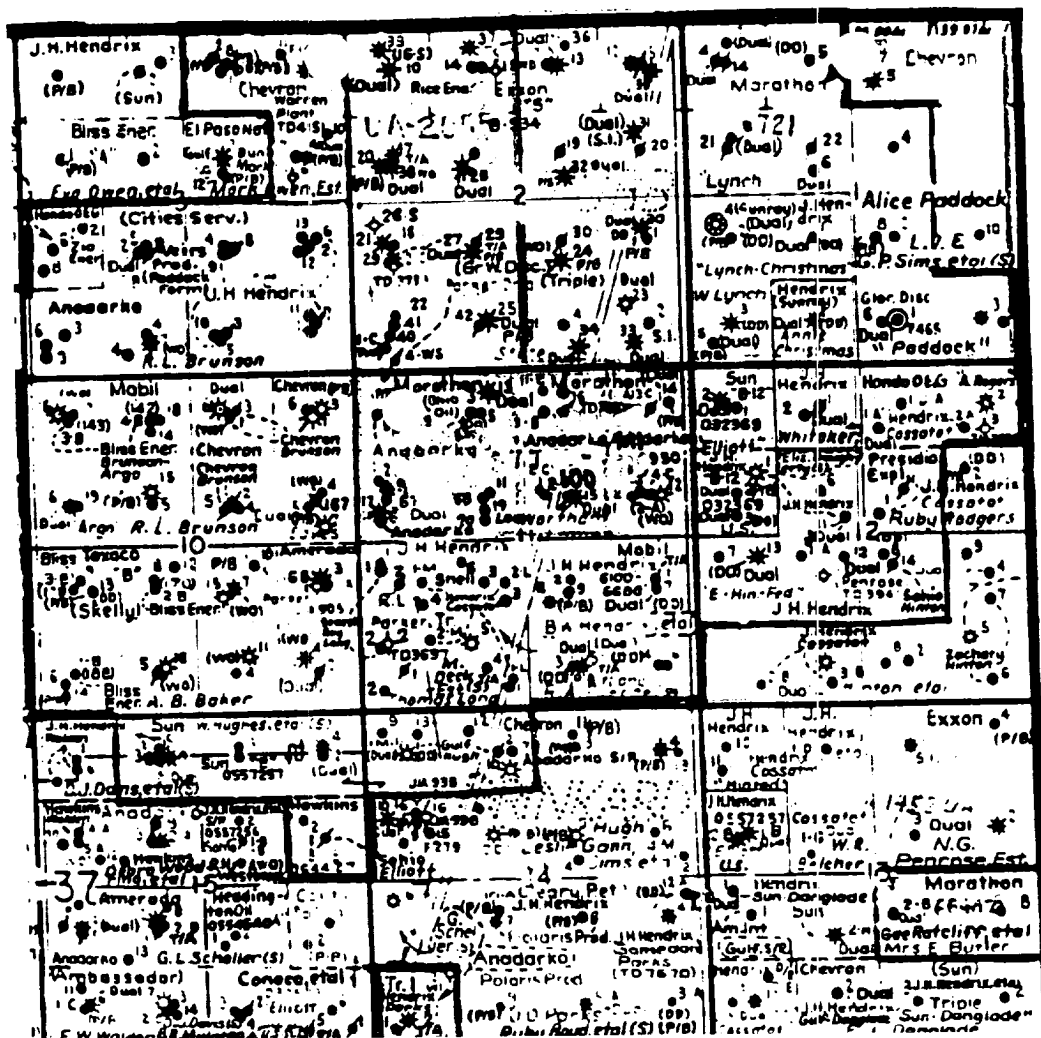
| <u>FORMATION</u> | <u>OIL (bpd)</u> | <u>GAS (mcfd)</u> | <u>WATER (bpd)</u> |
|------------------|------------------|-------------------|--------------------|
| Tubb             | 2                | 177               | 0                  |
| Drinkard*        | <u>1</u>         | <u>200</u>        | <u>1</u>           |
| TOTAL            | <u>3</u>         | <u>377</u>        | <u>1</u>           |

\* Estimated due to shut-in status.

Allocated Percentages should be:

| <u>FORMATION</u> | <u>OIL (%)</u> | <u>GAS (mcfd)</u> | <u>WATER (bpd)</u> |
|------------------|----------------|-------------------|--------------------|
| Tubb             | 67             | 47                | 0                  |
| Drinkard         | <u>33</u>      | <u>53</u>         | <u>100</u>         |
| TOTAL            | <u>100</u>     | <u>100</u>        | <u>100</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.



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-102  
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 API Number<br>03-025-10219 |  | 2 Pool Code                             |  | 3 Pool Name<br>Tubb |                         |
| 4 Property Code<br>006488    |  | 5 Property Name<br>Lou Worthan          |  |                     |                         |
| 6 OGRID No.<br>14021         |  | 7 Operator Name<br>Marathon Oil Company |  |                     |                         |
|                              |  |                                         |  |                     | 8 Well Number<br>10     |
|                              |  |                                         |  |                     | 9 Elevation<br>3370' GL |

10 Surface Location

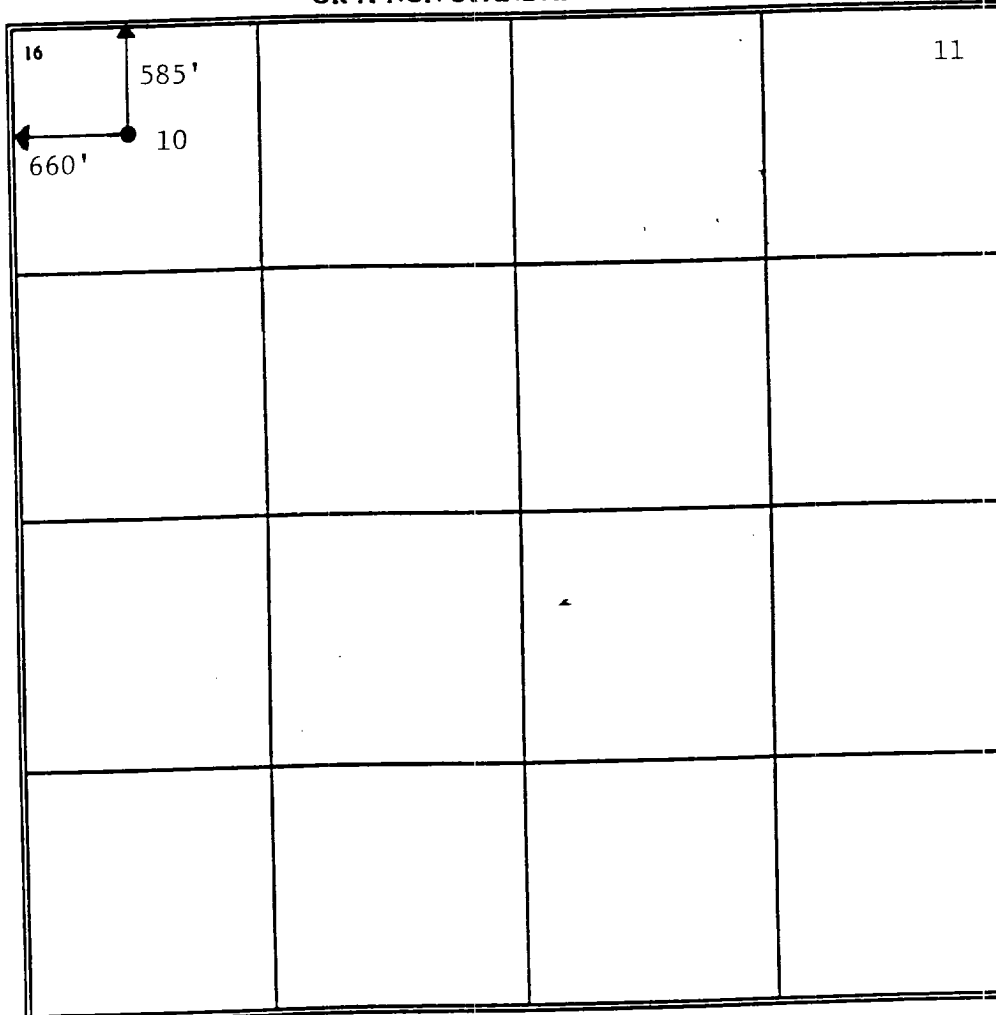
| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D             | 11      | 22S      | 37E   | --      | 585           | North            | 660           | 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<br>40 | 13 Joint or Infill<br>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



17 OPERATOR CERTIFICATION

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

*Rick D. Gaddis*

Signature

Rick D. Gaddis

Printed Name

Petroleum Engineer

Title

May 19, 1994

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 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-102  
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 API Number<br>30-025-10219 |  | 2 Pool Code<br>19190                    |  | 3 Pool Name<br>Drinkard |                         |
| 4 Property Code<br>006488    |  | 5 Property Name<br>Lou Worthan          |  |                         | 6 Well Number<br>10     |
| 7 OGRID No.<br>14021         |  | 8 Operator Name<br>Marathon Oil Company |  |                         | 9 Elevation<br>3370' 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 |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D             | 11      | 22S      | 37E   | --      | 585           | North            | 660           | 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<br>40 | 13 Joint or Infill<br>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

|  |                                                                                                                                                                                                                      |  |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | 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<br>                                                                                                                                                                                                        |  |
|  | Printed Name<br>Rick D. Gaddis<br>Title<br>Petroleum Engineer<br>Date<br>May 19, 1994                                                                                                                                |  |
|  | 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<br>Signature and Seal of Professional Surveyor:                                                                                                                                                       |  |
|  | Certificate Number                                                                                                                                                                                                   |  |

# OIL CONSERVATION DIVISION

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

Submit 2 copies to Appropriate  
District Office.

Marathon Oil Company  
P.O. Box 2409, Hobbs, NM 88240  
O. Drawer DD, Artesia, NM 88210  
000 Rio Brazos Rd., Aztec, NM 87410

## GAS - OIL RATIO TEST

| Lease Name |    | Well No. |     | Location |  |  | Date of Test | Size of Test | Choke Size | Tbg. Press. | Daily Allowable | Length of Test Hours | Prod. During Test |           |           | Completion |  | Special | GAS - OIL RATIO |
|------------|----|----------|-----|----------|--|--|--------------|--------------|------------|-------------|-----------------|----------------------|-------------------|-----------|-----------|------------|--|---------|-----------------|
| U          | S  | T        | R   |          |  |  |              |              |            |             |                 |                      | Water Bbls.       | Grav. Oil | Oil Bbls. |            |  |         | CU FT/BBL       |
| D          | 11 | 22S      | 37E |          |  |  | 5/16/94      | P            | N/A        | 30          | N/A             | 24                   | 0                 | 40        | 2         |            |  |         | 88,5'           |

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

### 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.)

Signature

Rick D. Gaddis, Petroleum Engineer

Printed name and title

May 20, 1994 (505) 393-7106

Date

Telephone No.

ISTRICLI  
O. Box 1980, Hobbs, NM 88240  
ISTRICLI  
O. Drawer DD, Artesia, NM 88210  
ISTRICLI  
000 Rio Brazos Rd., Aztec, NM 87410

# OIL CONSERVATION DIVISION

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

## GAS - OIL RATIO TEST

| Operator                    |          | Pool               |    | County     |              | Lea        |             |                   |                      |                   |             |           |                            |           |
|-----------------------------|----------|--------------------|----|------------|--------------|------------|-------------|-------------------|----------------------|-------------------|-------------|-----------|----------------------------|-----------|
| Marathon Oil Company        |          | Drinkard *         |    |            |              |            |             |                   |                      |                   |             |           |                            |           |
| Address                     |          | TYPE OF TEST - (X) |    | Completion |              | Special    |             |                   |                      |                   |             |           |                            |           |
| PO Box 2409 Hobbs, NM 88240 |          | SCHEDULED          |    |            |              | X          |             |                   |                      |                   |             |           |                            |           |
| 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 BBLs. | GRAV. OIL |                            | OIL BBLs. |
| Lou Worthan                 | 10       | D                  | 11 | 22S        | 37E          | N/A        | 30          | N/A               | 24                   | 1                 | 40          | 1         | 200                        | 200, 0    |

\* Zone is below CIBP, Estimated rates 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.

*Rick D. Gaddis*

Signature

Rick D. Gaddis, Petroleum Engineer

Printed name and title

May 20, 1994 (505) 393-7106

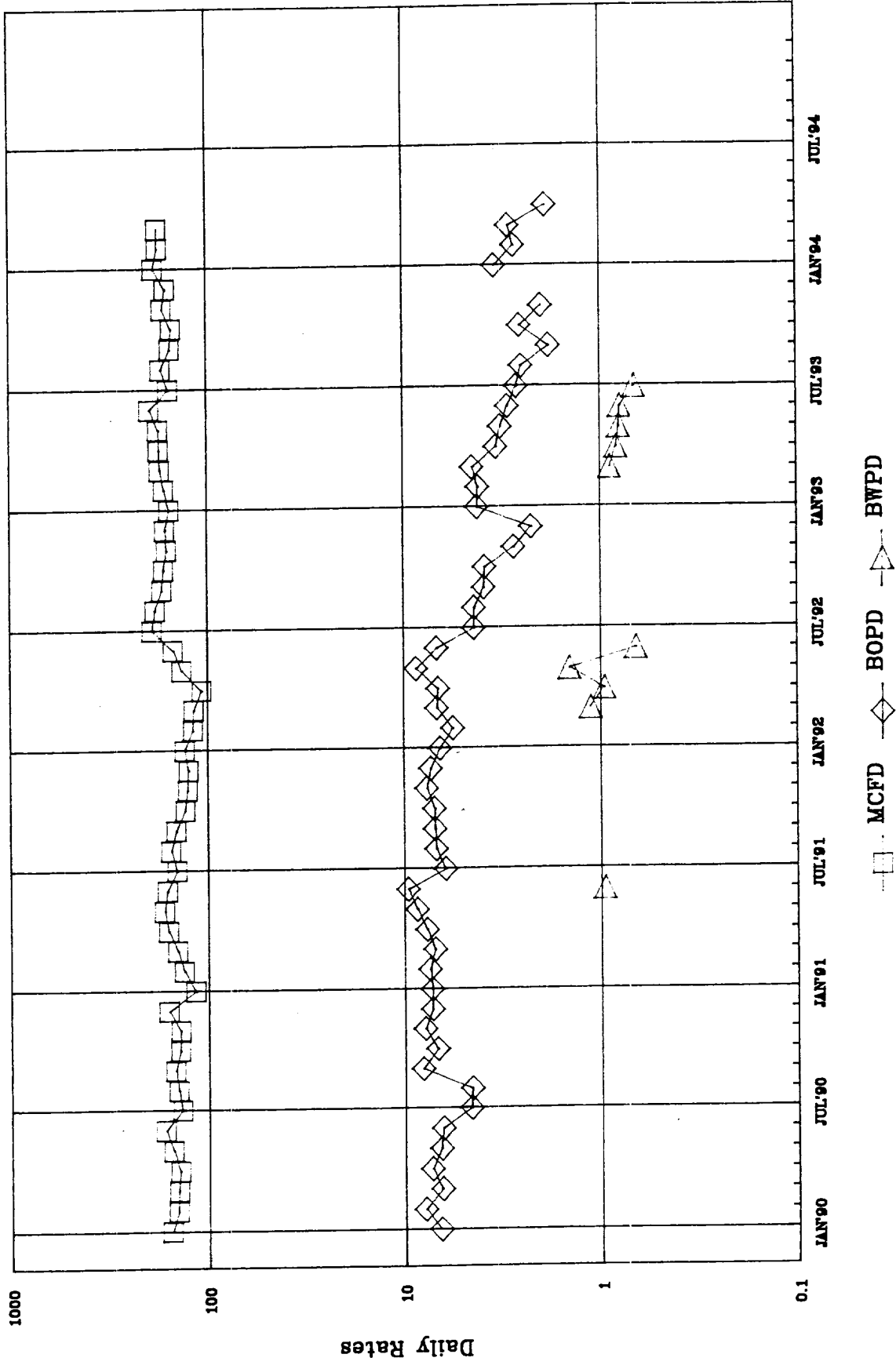
Date

Telephone No.

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

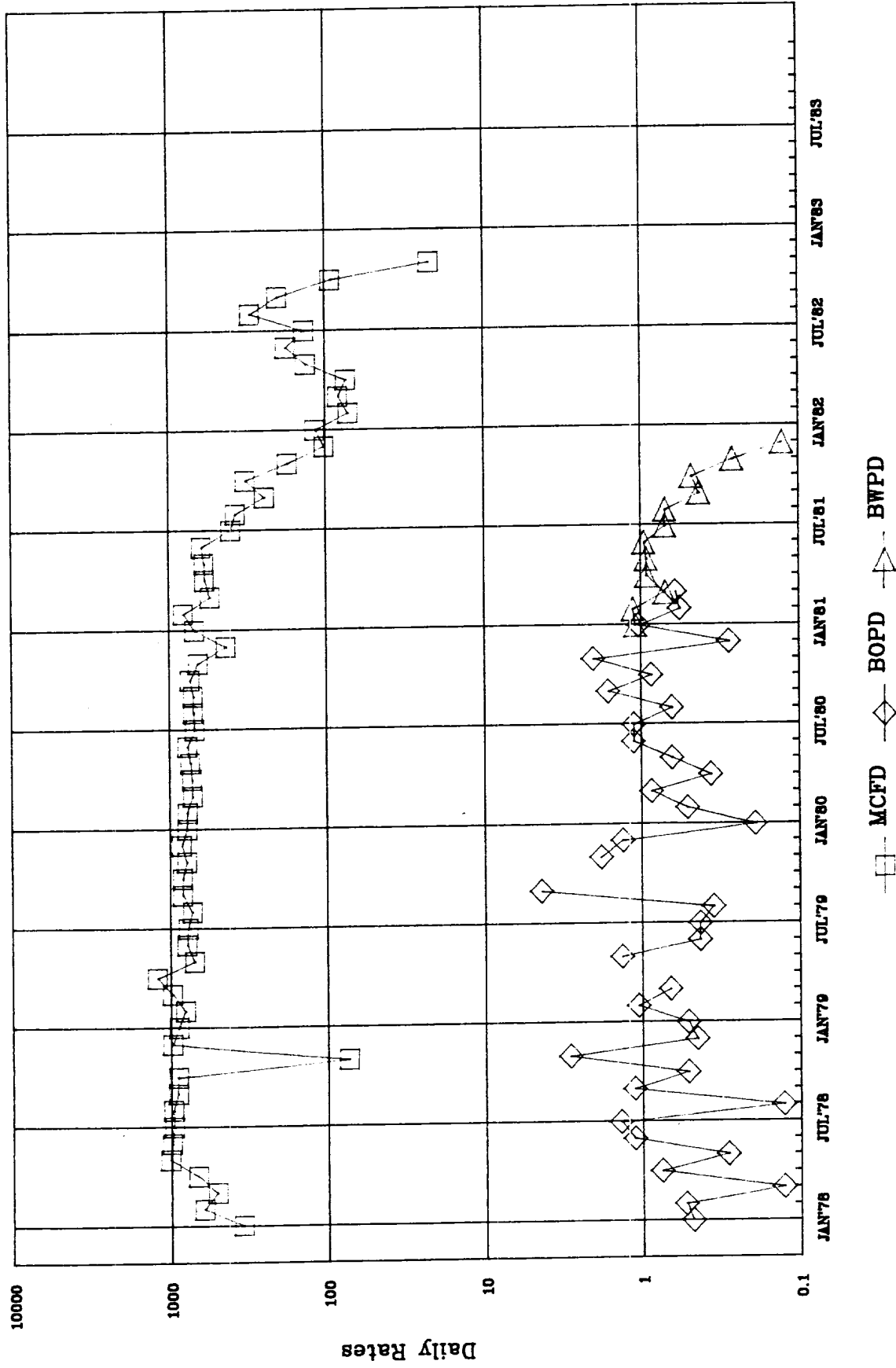
# LOU WORTHAN WELL NO. 10

Average Daily Tubb Production



# LOU WORTHAN WELL NO. 10

Average Daily Drinkard Production



# LOU WORTHAN WELL NO. 10 DRINKARD FIELD

Unit D, 585' FNL & 660' FWL

SECTION 11, T-22S, R-37E

LEA COUNTY, NEW MEXICO

TD: 6512' PBD: 6180'

KB: 3381' GL: 3370'

SURFACE: 13 3/8", 48#/ft, 8rd, LT&C  
set at 303'. Cemented with 250  
sxs.

INTERMEDIATE: 8 5/8", 32#/ft, 8rd,  
LT&C set at 2768'. Cemented with  
1500 sxs.

PRODUCTION: 5 1/2", 17#/ft, J-55  
8rd set at 6501'. Cemented with  
800 sxs. regular cement.

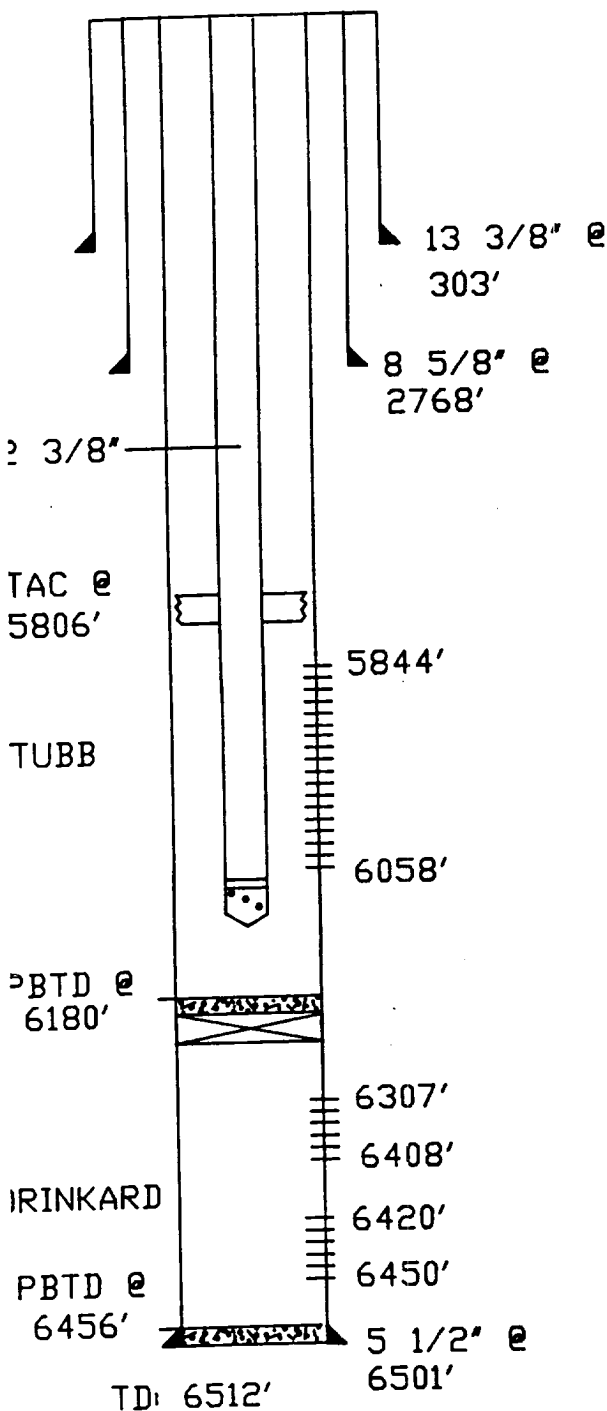
TUBING: 2 3/8", 4.7#, J-55, 8rd, EUE.  
TAC at 5806' with seating nipple  
at 6059'.

RODS & PUMP: 3/4" x 25' grade D with  
1 1/4" x 22' polish rod. 2" x 1 1/4"  
x 16' RHBC pump.

## PRESENT COMPLETIONS:

Tub: 5844', 45', 53', 62', 63', 68', 83', 97',  
98', 99', 5900', 01', 02', 03', 04', 12', 13',  
14', 15', 20', 21', 22', 34', 35', 36', 38',  
70', 71', 72', 73', 74', 75', 76', 77', 78',  
96', 97', 98', 99', 6000', 14', 27', 28', 29',  
56', 57' & 58'. 2 JSPF for  
96 holes.

HISTORY: Drilled December, 1949 as a Drinkard gas well. IP'd at top  
allowable of 98 BOPD and 176 MCFD. Added upper Drinkard pay in  
3/74. Acidized 6420-50' and frac'd new perms 6307'-6408'. IP'd  
for 1023 MCFD. No record of RBP being removed. Recompleted  
to Tub on 8/01/83. Acidized and frac'd perms 5844 to 6058'.  
IP'd pumping 30 BD, 28 BLW and 242 MCF per day.



OFFSET OPERATORS

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

Exxon Company USA  
P. O. Box 1600  
Midland, TX 79702-1600  
Attn: Land Department

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

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

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

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

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

American Exploration Company  
1331 Lamar, Ste 900  
Houston, TX 77010-3086

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

Mobil Exploration & Producing U.S. Inc.  
P. O. Box 633  
Midland, TX 79702-0633  
Attn: Larry Coppedge

Texaco Exploration & Production  
P. O. Box 3109  
Midland, TX 79702-3109  
Attn: Land Department

Shell Oil Company  
P. O. Box 2463  
Houston, TX 77252-2463  
Attn: Land Department

**RECEIVED**

**JUN 06 1994**

**U.S. CUSTOMS  
OFFICE**



**Marathon  
Oil Company**

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

May 19, 1994

Offset Operators  
Lou Worthan Well No. 10  
(mailing list attached)

RE: REQUEST FOR EXCEPTION TO RULE 303-A  
DOWNHOLE COMMINGLING  
MARATHON OIL COMPANY  
LOU WORTHAN WELL NO. 10  
UNIT D, 585' FNL & 660' 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 that reads 'S.P. Guidry'.

S.P. Guidry  
Northwest Operations  
Production Superintendent

RDG:SPG/9457/kc  
Attachments

-----

Agreed and accepted this \_\_\_\_\_ day of \_\_\_\_\_,  
1994 by \_\_\_\_\_, as representative of  
\_\_\_\_\_.

**RECEIVED**

**JUN 08 1994**

**OLD HOBBS  
OFFICE**