



**Marathon  
Oil Company**

P.O. Box 552  
Midland, TX 79702-0552  
Telephone 915/682-1626

OIL CONSERVATION DIVISION  
RECEIVED

SEP 10 9 AM 9 24

RELEASE 11:30 '92

August 18, 1992

Mr. Michael E. Stogner  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

RE: Request for Permit to Downhole Commingle  
Warn State A/C 2 No. 9  
Section 6, T-18-S, R-35-E  
Abo Reef/Drinkard  
Lea County, New Mexico

Dear Mr. Stogner,

Marathon Oil Company respectfully requests Administration Approval for Downhole Commingling of Production from the Abo Reef and the Drinkard Pools in the subject well. The above referenced well is currently producing from the Abo Reef formation and it is estimated to have a BHP of 300 psi using fluid level measurements. The well has a cumulative production of 389 MBO.

A drill stem test conducted in 1962 recorded a final shut-in pressure of 710 psi for the Drinkard zone in the Texaco State of New Mexico "R" (NCT-4) No.2 well. This corresponding zone in the Warn State A/C 2 No. 9 is below 450 psi due to depletion of the Drinkard reservoir by offset operators. This is evident by the Texaco State of New Mexico "R" (NCT-4) Well Nos. 1 and 2 which produced from January, 1962 to 1965. Based on the historic performance in the area as demonstrated by these wells, we believe crossflow between the two zones will not occur. These wells are currently uneconomic in the Drinkard due to depletion indicating a significant reduction in BHP.

All ownership (WI, Royalty, and ORRI) in the wellbore is the same. 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 Abo Reef and Drinkard; and maximize production by doing so. We look forward to your approval of this application.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Steven P. Guidry'.

Steven P. Guidry  
Production Superintendent

ATTACHMENT NO. 1

REQUEST FOR COMMINGLE PERMIT

WARN STATE A/C 2 NO. 9  
ABO REEF, DRINKARD FORMATIONS  
LEA COUNTY, NEW MEXICO

Reference: Section C-2 Rule 303

- A. Marathon Oil Company  
P. O. Box 552  
Midland, Texas 797902
- B. Warn State A/C 2 No. 9  
Unit M, 913' FWL and 330' FSL  
Section 6, T-18-S, R-35-E  
Lea County, New Mexico (See Attachment No. 2 Form C-103)
- C. Plat of area can be seen on Attachments 3A and 3B.
- D. Form C-116 for Abo Reef Completion (Attachment 5).
- E. Well was spudded 4/22/62. Perforated from 8,541'-8,606' and treated w/1,500 gals acid; well flowed 337 BOPD. 6/71 - perforated 8,636'-8,702' and treated w/2,000 gal acid. Perforated 8,423'-8,524' and treated with 5,000 gal acid. (8/85) Treated perforations with 4,000 gals 15% NEFE acid. (11/90) Acidized 8,636'-8,683', 8,541'-8,608', and 8,423'-8,524' w/15% HCL (Attachments 6). Attachment 7 identifies offset decline in the Drinkard Pool.
- F. Bottomhole pressure for the Abo Reef was estimated from recent pressure tests. Bottomhole pressure for the Drinkard estimated from 1962 offset DST and taking into account depletion due to offset production.
- Abo Reef - 300 psi  
Drinkard - 350-500 psi
- G. Fluid data from referenced well as well as offset has been analyzed and no incompatibilities exist.
- H. Analysis of the produced fluid indicates no reduction in value from commingling.
- I. Estimated production assuming 57% contribution for the Drinkard based on offset initial production history.

| <u>ZONE</u>          | <u>OIL</u><br><u>(BOPD)</u> | <u>OIL</u><br><u>(%)</u> | <u>GAS</u><br><u>(MCFGPD)</u> | <u>GAS</u><br><u>(%)</u> | <u>WATER</u><br><u>(BWPDP)</u> |
|----------------------|-----------------------------|--------------------------|-------------------------------|--------------------------|--------------------------------|
| Drinkard (Estimated) | 17                          | 57                       | 5                             | 13                       | 0                              |
| ABO Reef             | 13                          | 43                       | 35                            | 87                       | 9                              |

- J. By copy of this letter via certified mail, we are notifying all offset operators of the proposed commingling.

Submit 3 Copies  
to Appropriate  
District Office

Energy, Minerals and Natural Resources Department

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

## OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088WELL API NO.  
30-025-0308305. Indicate Type of Lease  
STATE ☒ FEE ☐

6. State Oil &amp; 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 ☒GAS  
WELL ☐OTHER ☐

Warn State A/C 2

## 2. Name of Operator

Marathon Oil Company

## 8. Well No.

9

## 3. Address of Operator

P. O. Box 552, Midland, Texas 79702

## 9. Pool name or Wildcat

ABO Reef/Drinkard

## 4. Well Location

Unit Letter M : 330' Feet From The South Line and 914.3' Feet From The West LineSection 6 Township 18-S Range 35-E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11.

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

## NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐PLUG AND ABANDON ☐TEMPORARILY ABANDON ☐CHANGE PLANS ☐PULL OR ALTER CASING ☐OTHER: Downhole Commingle ☒

## SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ALTERING CASING ☐COMMENCE DRILLING OPNS. ☐PLUG AND ABANDONMENT ☐CASING TEST AND CEMENT JOB ☐OTHER: ☐

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 Abo Reef and the Drinkard Zones.

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

SIGNATURE

TITLE

Production Superintendent

DATE

TYPE OR PRINT NAME

Steven P. Guidry

TELEPHONE NO.

(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

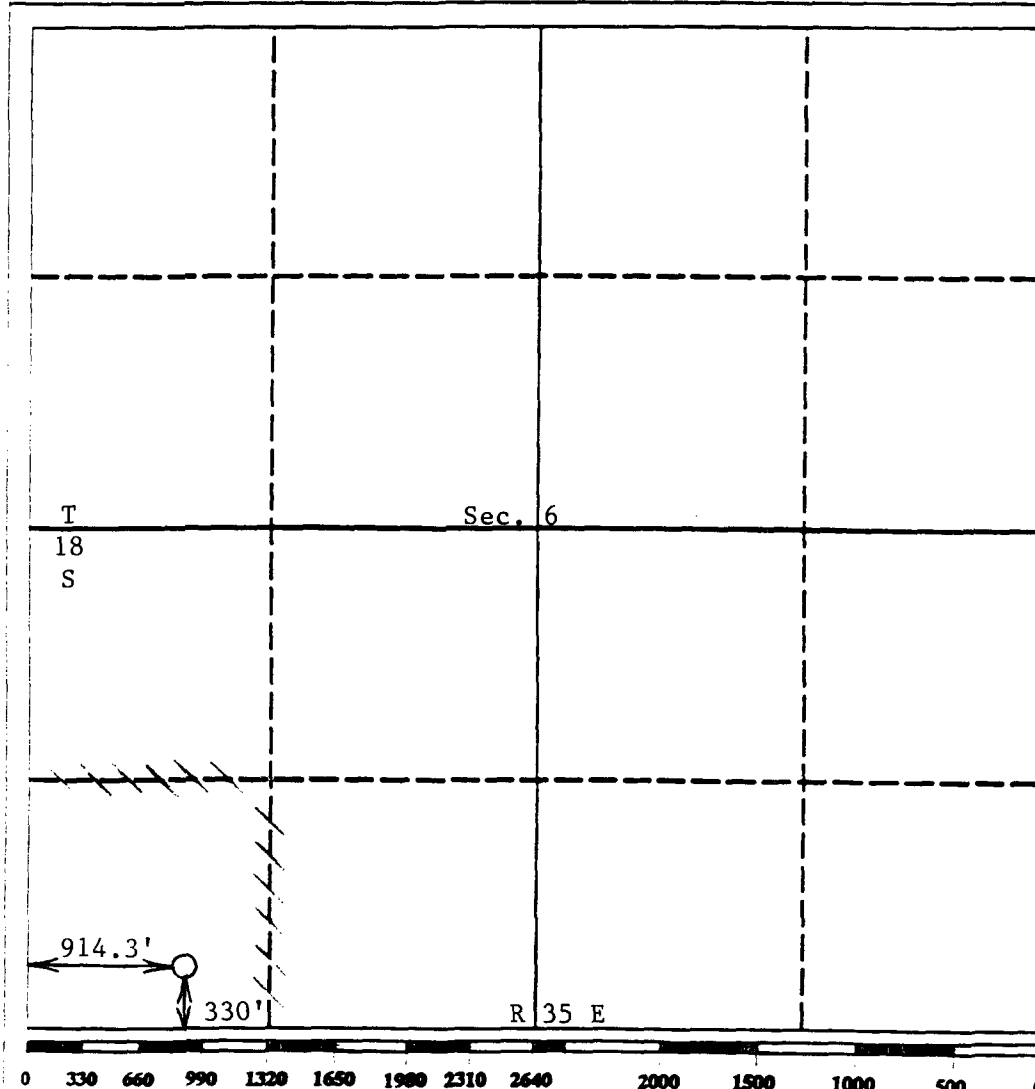
|                                  |                     |                  |          |                                |     |
|----------------------------------|---------------------|------------------|----------|--------------------------------|-----|
| Operator                         |                     | Lease            |          | Well No.                       |     |
| Marathon Oil Company             |                     | Warn State A/C 2 |          | 9                              |     |
| Unit Letter                      | Section             | Township         | Range    | County                         |     |
| M                                | 6                   | 18-S             | 35-E     | NMPM                           | Lea |
| Actual Footage Location of Well: |                     |                  |          |                                |     |
| 330'                             |                     | South line and   |          | 914.3' feet from the West line |     |
| Ground level Elev.               | Producing Formation |                  | Pool     | Dedicated Acreage:             |     |
| 3,979'                           | Abo Reef            |                  | Abo Reef | 40 Acres                       |     |

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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, force-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

Steven P. Guidry

Printed Name

Production Superintendent

Position

Marathon Oil Company

Company

Date

8/21/92

## 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.

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

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## 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<br>Marathon Oil Company  |                                 | Lease<br>Warn State A/C 2      |                                | Well No.<br>9 |  |
| Unit Letter<br>M                  | Section<br>6                    | Township<br>18-S               | Range<br>35-E                  | County<br>Lea |  |
| Actual Footage Location of Well:  |                                 |                                |                                |               |  |
| 330' feet from the South line and |                                 | 914.3' feet from the West line |                                |               |  |
| Ground level Elev.<br>3,979'      | Producing Formation<br>Drinkard | Pool<br>Drinkard               | Dedicated Acreage:<br>40 Acres |               |  |

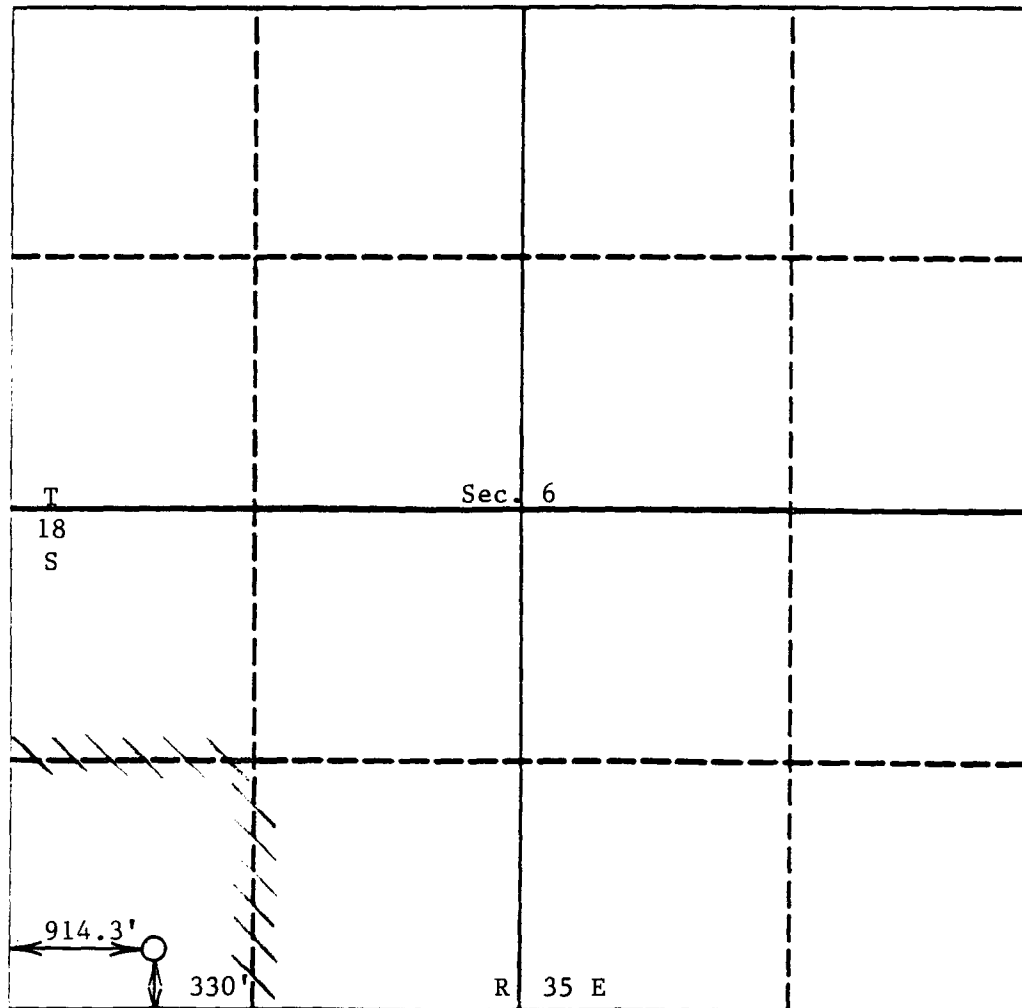
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is 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

Steven P. Guidry

Printed Name

Production Superintendent

Position

Marathon Oil Company

Company

Date

8/21/82

## SURVEYOR CERTIFICATION

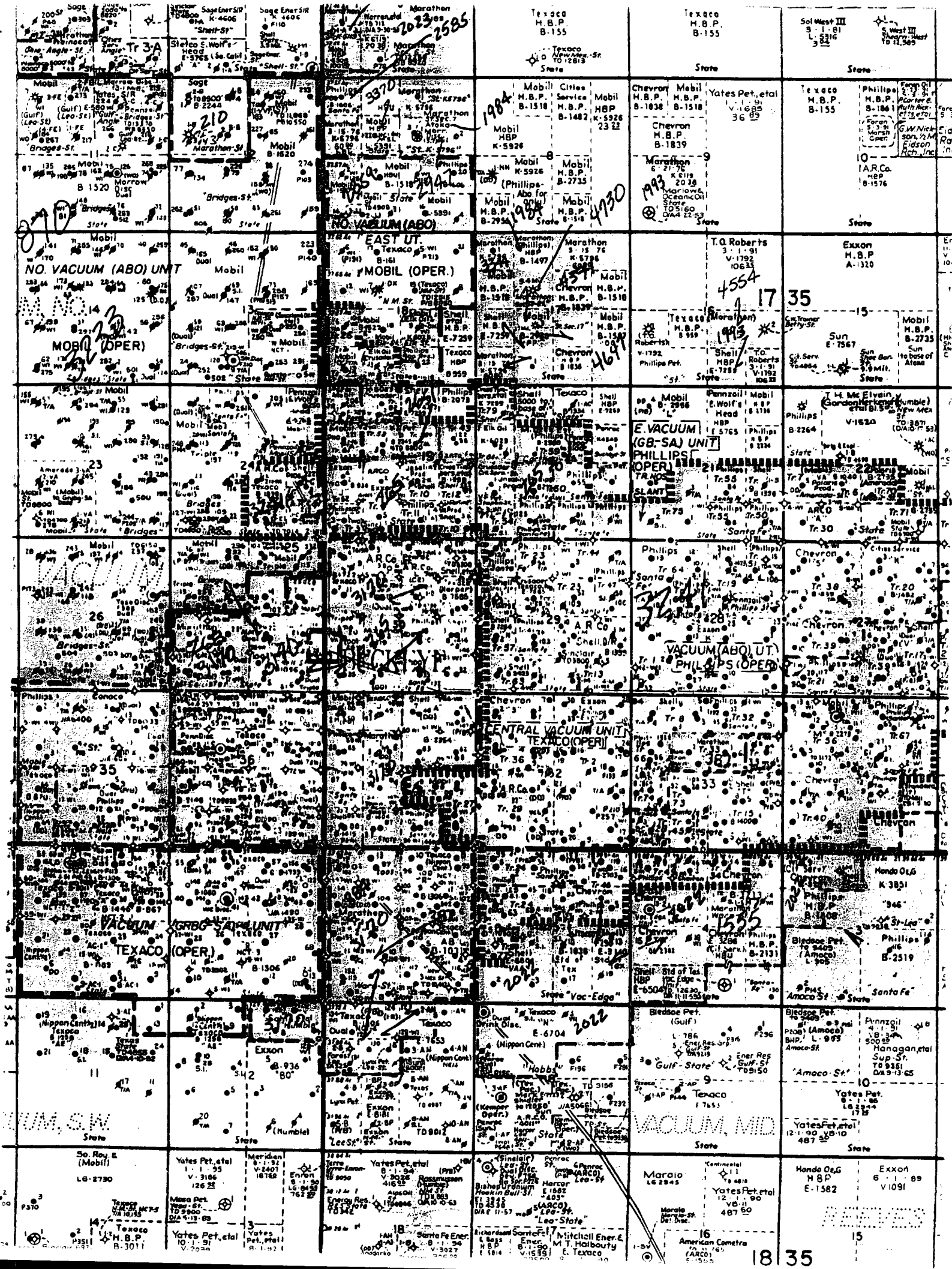
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Signature & Seal of  
Professional Surveyor

Certificate No.

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0



Submit 2 copies to Appropriate District Office.

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240  
DISTRICT II  
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1000 Rio Brazos Rd., Aztec, NM 87410

ATTACHMENT NO. 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<br>Marathon Oil Company               |          | Pool<br>ABO Reef   |   | County<br>Lea   |    |              |           |            |               |                  |                      |                   |           |           |                           |          |
|--|----------|--|---|---|----|--------------|-----------|------------|---------------|------------------|----------------------|-------------------|-----------|-----------|---------------------------|----------|
| Address<br>P. O. Box 552, Midland, Texas 79702 |          | TYPE OF TEST - (X)<br><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 | % FLOW IN | CHOKE SIZE | T.B.G. PRESS. | DAILY ALLOW-ABLE | LENGTH OF TEST HOURS | PROD. DURING TEST |           |           | GAS - OIL RATIO CU FT/BL. |          |
|  |          | U  | S | T   | R  |              |           |            |               |                  |                      | WATER BRLS.       | GRAV. OIL | OIL BRLS. |                           | GAS MCF. |
| Warn State A/C 2                               | 9        | M  | 6 | 18  | 35 | 7/15/92      | P         | ---        | 20            | 14               | 24                   | 10                | 38        | 13        | 45                        | 3,462    |

### 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

Printed name and title

Date

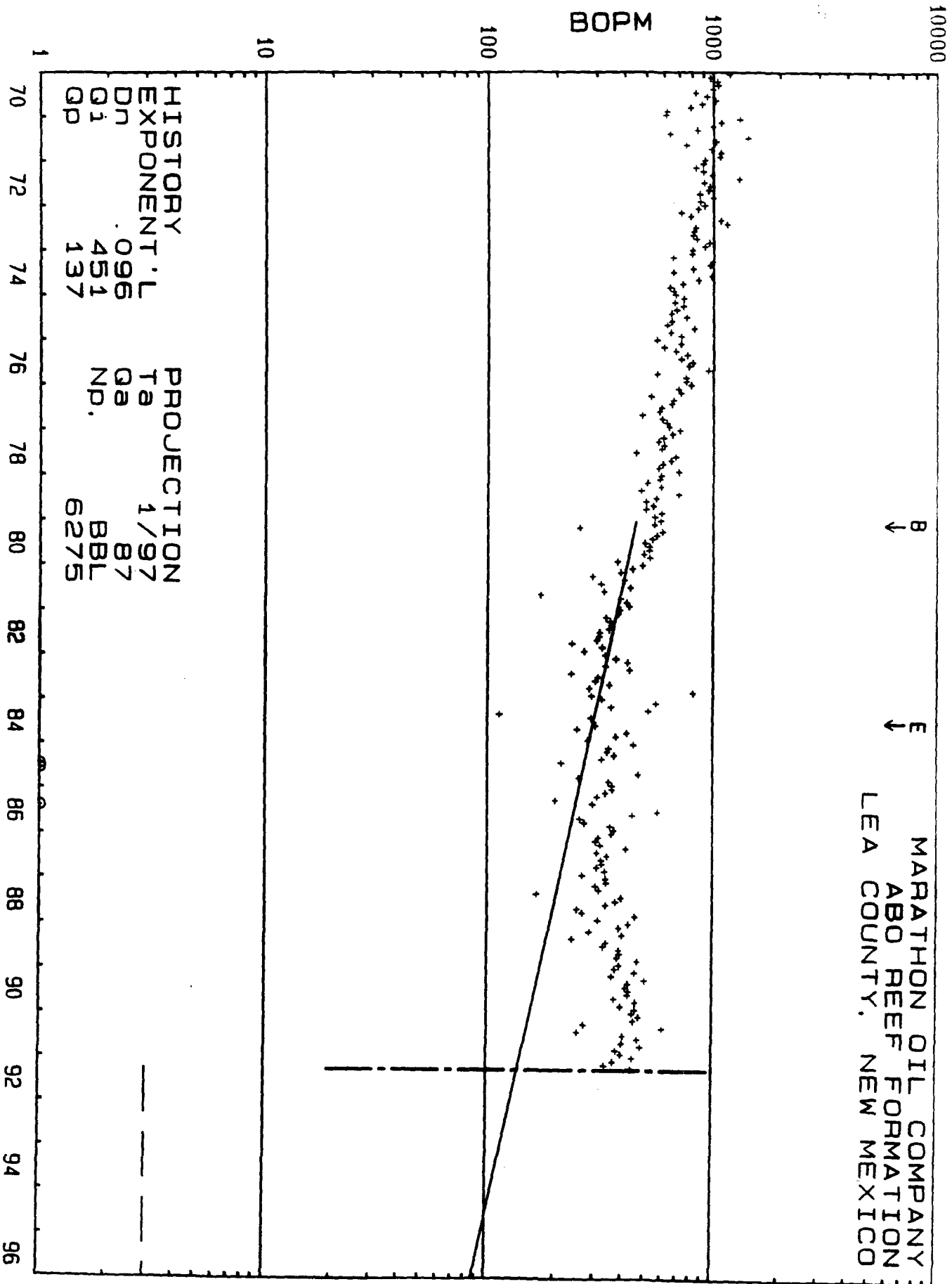
Telephone No.

*Allen S. Wilson*

*George S. Surr?*

*8/17/92*

# WAH N SIAIE A/C 2 NU. 9





# NEW MEXICO STATE HISTORICAL RECORDS

VACUUM DRINKARD FIELD  
DRINKARD FORMATION  
LEA COUNTY, NEW MEXICO

E  
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