



STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE

GABRIEL CARRUTHERS  
GOVERNOR

12-14-87

POST OFFICE BOX 1990  
HOBBS, NEW MEXICO 88241-1990  
(505) 393-6161

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

*DL-510*

*amended*

RE: Proposed:

MC  
DHC ☒  
NSL  
NSP  
SWD  
WFX  
PMX

Gentlemen:

I have examined the application for the:

*Conoco Inc. Warren Unit #78-9 20-20-38*  
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

*OK*

Yours very truly,

*Jerry Sexton*  
Jerry Sexton  
Supervisor, District 1

/ed



NMOCV Hobbs

R. E. Irean  
Division Manager  
Production Department  
Hobbs Division  
North American Production

Conoco Inc.  
P.O. Box 460  
726 East Michigan  
Hobbs, NM 88240  
(505) 393-4141

December 7, 1987

Mr. Bill LeMay, Director  
New Mexico Oil Conservation Division  
P.O. Box 2088  
Santa Fe, NM 87504-2088

Dear Mr. LeMay:

Application to Downhole Commingle Warren Unit No. 78, Unit I, Section 20,  
T-20S, R-38E, Lea County, New Mexico

Conoco Inc. respectfully requests an amendment to DHC Order No. 510 to include the Warren Drinkard producing horizon. This order was rendered July 31, 1984, giving approval to downhole commingle the Blinebry Oil and Gas and Warren Tubb Oil zones in the subject well. This well is within the boundaries of the Blinebry and Tubb participating areas. The Drinkard formation in this well is slightly productive, but appears to be noncommercial and a participating area will not be established. Unless downhole commingling is permitted, the Drinkard reserves will not be recovered.

Additional data relative to this commingling is listed below:

1. A lease plat is attached showing the location of this well.
2. C-116's are included providing a test for each zone.
3. Decline curves for each horizon are attached.
4. Estimated shut-in bottomhole pressures are 367 psi for the Blinebry, 791 psi for the Tubb (both zones measured at Warren Unit No. 62 the south offset well) and 780 psi for the Drinkard (calculated using shut-in fluid level and fluid gradient). All zones require artificial lift to remove liquids.
5. The quality of crude is identical and commingling will not reduce the commercial value. All production is sweet Tier II. The value of the crude is as follows:

| <u>Zone</u>        | <u>Gravity</u> | <u>Value Per<br/>Barrel</u> |
|--------------------|----------------|-----------------------------|
| Blinebry Oil & Gas | 40.7           | \$18.70                     |
| Drinkard           | 40.7           | \$18.41                     |
| Warren Tubb Oil    | 40.7           | \$18.70                     |

Mr. Bill LeMay  
Page 2  
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6. The following allocation percentages are suggested based upon the ratio of production from each zone:

|                    | <u>Oil</u> | <u>Gas</u> |
|--------------------|------------|------------|
| Blinebry Oil & Gas | 28%        | 24%        |
| Warren Tubb Oil    | 42%        | 35%        |
| Drinkard           | 30%        | 41%        |

7. By copy of this letter, we are notifying the Bureau of Land Management and the offset operators of this proposed commingling.

Yours very truly,

 *for R&I*

R. E. Ireland  
Division Manager

COY:jd

Enclosure

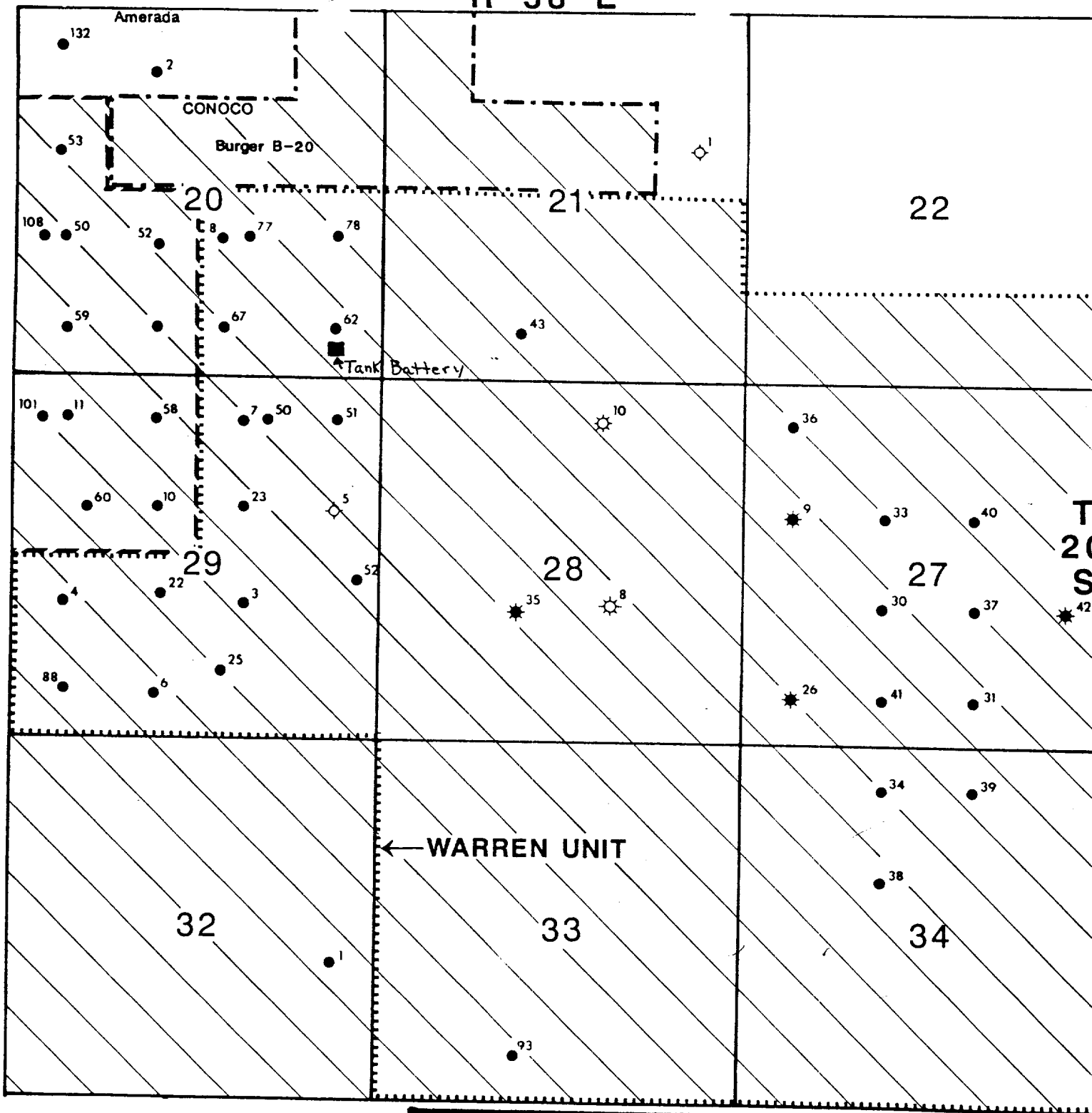
cc: BLM - Carlsbad  
Amerada Hess Corp. - Seminole

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R-38-E



N

ENGINEERING DEPARTMENT

CONOCO

WARREN UNIT NO. 78

LEA COUNTY, NEW MEXICO

SCALE

0' 1000' 2000'

## GAS-OIL RATIO TESTS

C-116

Revised 1-1-65

| Operator            |          | Pool                                   |    | BLINEBRY OIL & GAS |     | County                                        |            | LEA                                 |                   |                                  |                   |           |          |                           |            |
|---------------------|----------|----------------------------------------|----|--------------------|-----|-----------------------------------------------|------------|-------------------------------------|-------------------|----------------------------------|-------------------|-----------|----------|---------------------------|------------|
| Address             |          | P. O. BOX 460, HOBBS, NEW MEXICO 88240 |    | TYPE OF TEST - (X) |     | SCHEDULED <input checked="" type="checkbox"/> |            | Completion <input type="checkbox"/> |                   | Special <input 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.        | GRAV. OIL | OIL BBL. |                           | GAS M.C.F. |
| WARREN U. -BLINEBRY | 76       | J                                      | 33 | 20S                | 38E | 08-02-87                                      | P          |                                     |                   | 24                               | 1                 | 40.7      | 8        | 6                         | 750        |
| WARREN U. -BLINEBRY | 77       | J                                      | 20 | 20S                | 38E | 07-08-87                                      | P          |                                     |                   | 24                               | 4                 | 40.7      | 33       | 130                       | 3939       |
| DHC 509             |          |                                        |    |                    |     | 81.0% OIL                                     |            | 82.0% GAS                           |                   |                                  |                   |           | 27       | 107                       |            |
| DHC 509             |          |                                        |    |                    |     | 19.0% OIL                                     |            | 18.0% GAS                           |                   |                                  |                   |           | 6        | 23                        |            |
|                     |          |                                        |    |                    |     | 100.0% OIL                                    |            | 100.0% GAS                          |                   |                                  |                   |           | 33       | 130                       |            |
| WARREN U. -BLINEBRY | 78       | I                                      | 20 | 20S                | 38E | 08-18-87                                      | P          |                                     |                   | 24                               | 2                 | 40.7      | 12       | 58                        | 4833       |
| DHC 510             |          |                                        |    |                    |     | 41.0% OIL                                     |            | 40.0% GAS                           |                   |                                  |                   |           | 5        | 23                        |            |
| DHC 510             |          |                                        |    |                    |     | 59.0% OIL                                     |            | 60.0% GAS                           |                   |                                  |                   |           | 7        | 35                        |            |
|                     |          |                                        |    |                    |     | 100.0% OIL                                    |            | 100.0% GAS                          |                   |                                  |                   |           | 12       | 58                        |            |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

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 the well can be assigned increased allowables when authorized by the Commission.

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.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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



D. F. FINNEY

(Signature)

ADMINISTRATIVE SUPERVISOR

(Title)

07-OCT-87

(Date)

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HCBES OFFICE

## GAS-OIL RATIO TESTS

| Operator                               |    | Pool               |          | County                                        |     | LEA                                 |            |                                  |                   |                      |              |                                |            |            |                              |
|----------------------------------------|----|--------------------|----------|-----------------------------------------------|-----|-------------------------------------|------------|----------------------------------|-------------------|----------------------|--------------|--------------------------------|------------|------------|------------------------------|
| Address                                |    | TYPE OF TEST - (X) |          | Scheduled <input checked="" type="checkbox"/> |     | Completion <input type="checkbox"/> |            | Special <input type="checkbox"/> |                   |                      |              |                                |            |            |                              |
| LEASE NAME                             |    | WELL NO.           | LOCATION |                                               |     | DATE OF TEST                        | CHOKE SIZE | TBG. PRESS.                      | DAILY ALLOW. ABLE | LENGTH OF TEST HOURS | WATER BBL'S. | PROD. DURING TEST<br>GRAV. OIL | OIL BBL'S. | GAS M.C.F. | GAS-OIL RATIO<br>CU.FT./BBL. |
|                                        |    |                    | U        | S                                             | T   | R                                   |            |                                  |                   |                      |              |                                |            |            |                              |
| WARREN UNIT-TUBE<br>DUC 510<br>DUC 510 | 78 | I                  | 20       | 20S                                           | 38E |                                     | 7-6-87 P   |                                  |                   | 24                   | 2            | 40.7                           | 12         | 58         | 4833                         |
|                                        |    |                    |          |                                               |     |                                     | 41.0% OIL  | 40.0% GAS                        |                   |                      |              |                                | 5          | 23         |                              |
|                                        |    |                    |          |                                               |     |                                     | 59.0% OIL  | 60.0% GAS                        |                   |                      |              |                                | 7          | 35         |                              |
|                                        |    |                    |          |                                               |     |                                     | 100.0% OIL | 100.0% GAS                       |                   |                      |              |                                | 12         | 58         |                              |
| WARREN UNIT-TUBE                       | 79 | D                  | 35       | 20S                                           | 38E |                                     | 7-12-87 P  |                                  |                   | 24                   | 2            | 40.7                           | 7          | 25         | 3571                         |
| WARREN UNIT-TUBE                       | 86 | I                  | 29       | 20S                                           | 38E |                                     | 7-19-87 P  |                                  |                   | 24                   | 2            | 40.7                           | 15         | 17         | 1133                         |

No well will be assigned an allowable greater than the amount of oil produced on the official test.

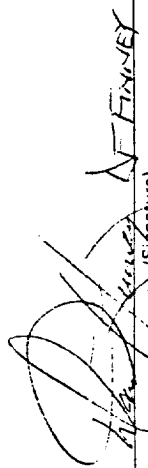
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Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

  
 (Signature)  
**ADMINISTRATIVE SUPERVISOR**  
 (Title)  
**06-AUG-87**  
 (Date)

NEW MEXICO OIL CONSERVATION COMMISSION  
GAS-OIL RATIO TESTS

C-116  
Revised 1-1-65

| Operator                     |          | Pool               |    | County    |              | Lea        |             |                 |                      |                   |             |           |                             |           |
|------------------------------|----------|--------------------|----|-----------|--------------|------------|-------------|-----------------|----------------------|-------------------|-------------|-----------|-----------------------------|-----------|
| Conoco Inc.                  |          | Warren Drinkard    |    | Lea       |              |            |             |                 |                      |                   |             |           |                             |           |
| Address                      |          | TYPE OF TEST - (X) |    | SCHEDULED |              | COMPLETION |             |                 |                      |                   |             |           |                             |           |
| P.O. Box 460 Hobbs, NM 88240 |          |                    |    |           |              |            |             |                 |                      |                   |             |           |                             |           |
| LEASE NAME                   | WELL NO. | LOCATION           |    |           | DATE OF TEST | CHOKE SIZE | TBG. PRESS. | DAILY ALLOWABLE | LENGTH OF TEST HOURS | PROD. DURING TEST |             |           | GAS - OIL RATIO CU.FT./BBL. |           |
|                              |          | U                  | S  | T         |              |            |             |                 |                      | R                 | WATER BBLs. | GRAV. OIL |                             | OIL BBLs. |
| Warren Unit                  | 78       | I                  | 20 | 20S       | 38E          | 11-15-87   | P           |                 | 24                   | 6                 | 40.7        | 6         | 40                          | 6,667     |

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

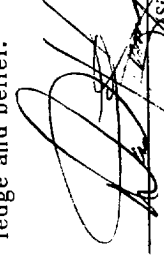
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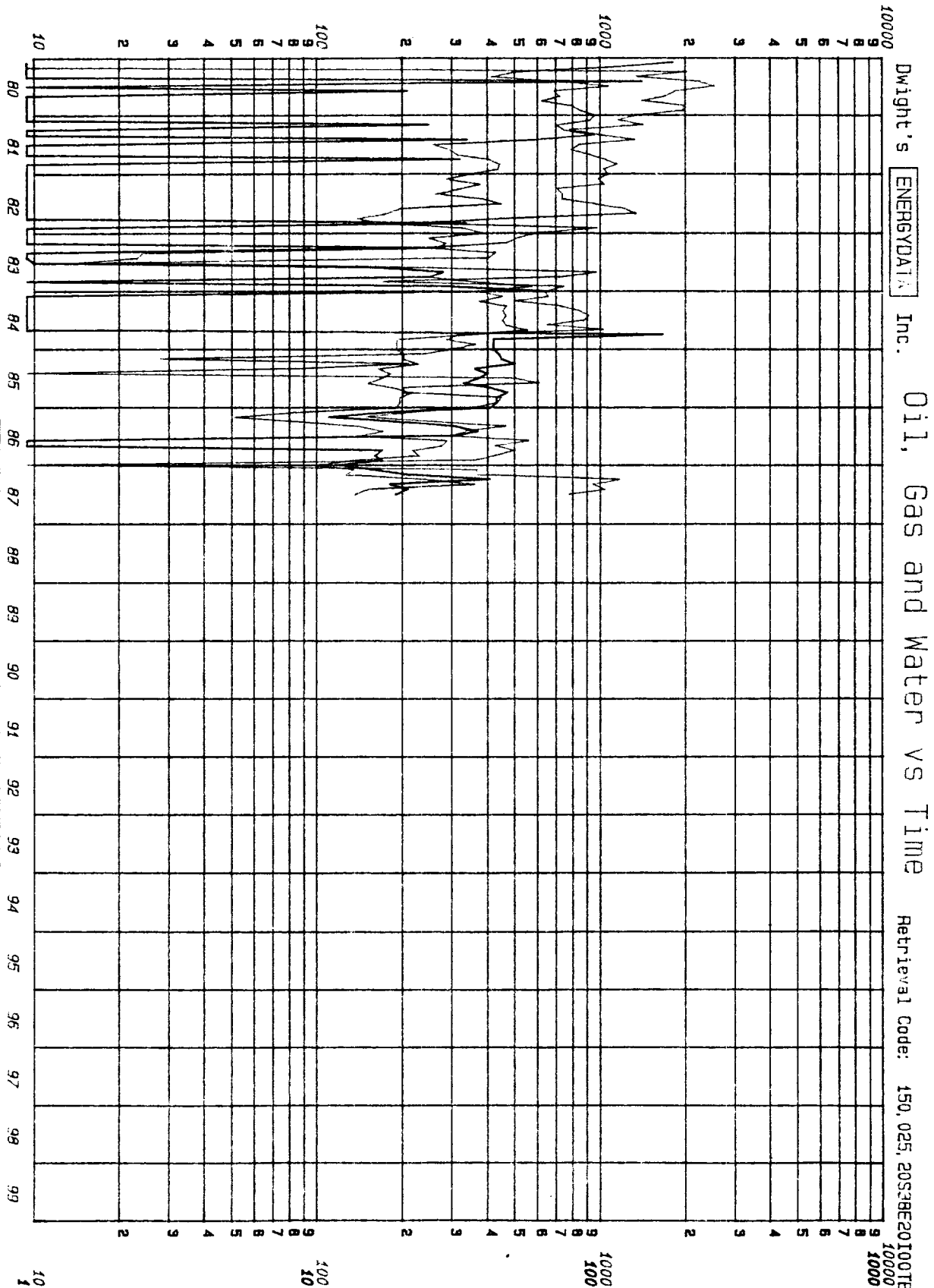
Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

 (Signature)  
Administrative Supervisor  
November 20, 1987 (Date)

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# MONTHLY OIL PRODUCTION (BBL/MO)

LEGEND  
OIL —  
GAS —  
WATER —



Dwight's ENERGY DATA, Inc. Oil, Gas and Water vs Time

Retrieval Code: 150, 025, 20538E20100TB

Lease: WARREN UNIT TUBB  
Well # 000078  
Operator: CONOCO INC  
Field: WARREN TUBB (OIL)  
Reservoir:  
County: LEA NM  
Location: 20 205 38E

TB

Date: 11-12-87

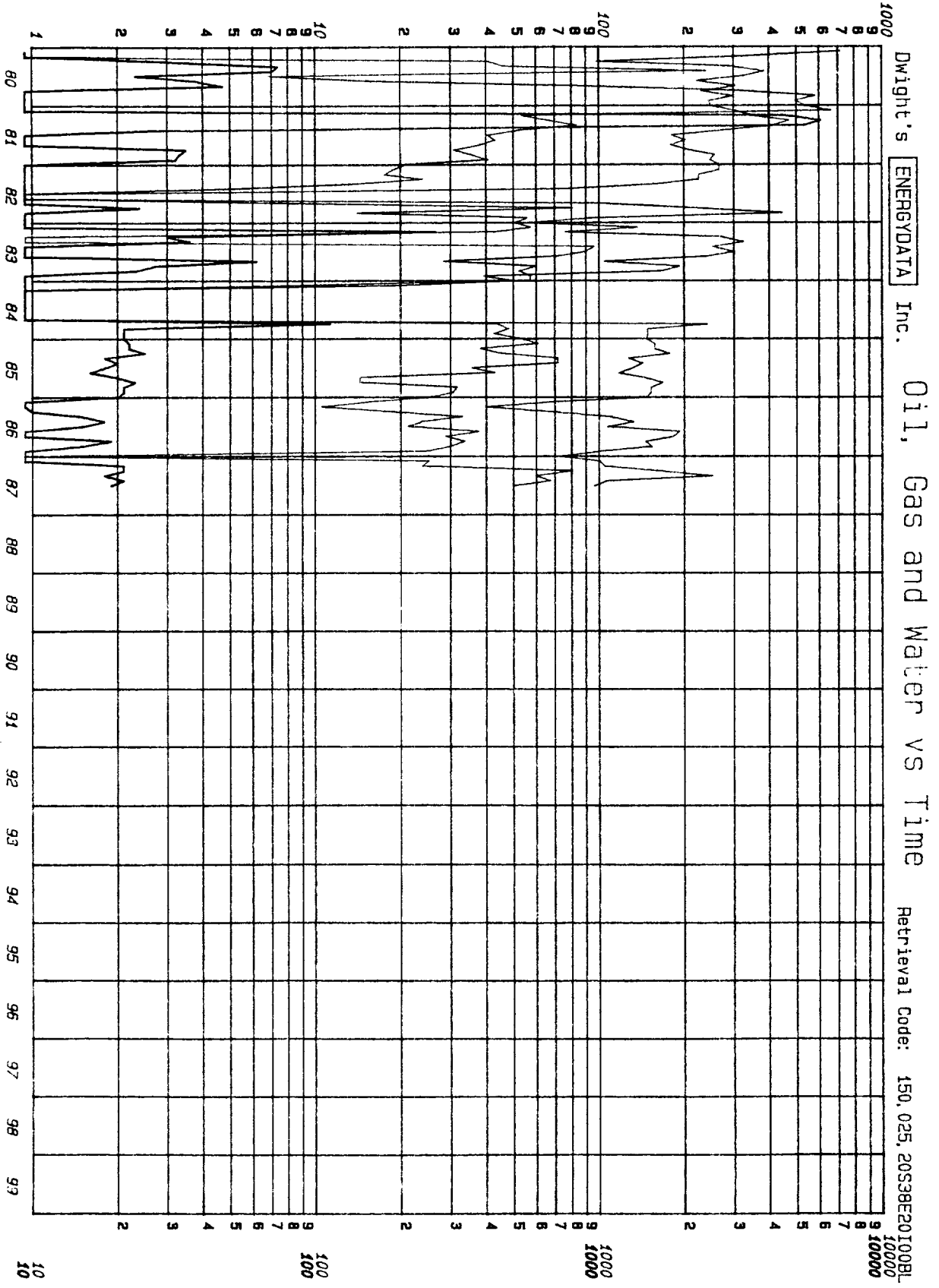
WATER (BBL/MO) MONTHLY GAS PRODUCTION (MCF/MO)

# MUNTHLY OIL PRODUCTION (BBL/MO)

| LEGEND |   |
|--------|---|
| OIL    | — |
| GAS    | — |
| WATER  | — |

Lease: WARREN UNIT BLINBRY BATTERY 6  
 Well # 000078  
 Operator: CONOCO INC  
 Field: BLINBRY OIL AND GAS  
 Reservoir: LEA  
 County: NM  
 Location: 20 205 38E

Date: 11-12-87



WATER (BBL/MO) MONTHLY GAS PRODUCTION (MCF/MO)

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