## STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 9230 Order No. R-8539

THE APPLICATION OF SHELL WESTERN E & P, INC., FOR POOL CREATION, SPECIAL POOL RULES, AND CONTRACTION OF THE BLINEBRY, TUBB, AND DRINKARD POOLS, LEA COUNTY, NEW MEXICO.

### ORDER OF THE DIVISION

#### BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on September 24, 1987, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this <u>9th</u> day of November, 1987, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and having been fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) Division Case Nos. 9230, 9231, and 9232 were consolidated at the time of the hearing for the purpose of testimony.

(3) The applicant, Shell Western E & P, Inc., seeks the creation of a new oil and gas pool for Blinebry, Tubb, and Drinkard production, said pool to be designated the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool comprising the following described acreage in Lea County, New Mexico:

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TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

Section 2: All Section 3: All Section 4: Lots 1, 8, 9, and 16 Section 10: All Section 11: SW/4 Section 14: NW/4 Section 15: All Section 22: All Section 23: All

(4) The applicant further proposes to define the vertical limits of the pool to include the Blinebry, Tubb, and Drinkard formations from a depth of 5530 feet (2101 feet sub-sea) to a depth of 6680 feet (3251 feet sub-sea) on the log run June 21, 1951 on the Shell Argo Well No. 8 located 660 feet from the South line and 2310 feet from the West line of Section 15, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.

(5) The applicant seeks the creation of said pool for the purpose of instituting a secondary recovery project (the subject of Case No. 9232) within the described horizontal and vertical boundaries described above.

(6) The applicant further seeks the promulgation of special rules and regulations for said pool including a provision that any well within the pool designated as a gas well will be subject to the gas proration rules set forth in Commission Order No. R-8170, as amended, a provision that simultaneous dedication of pool acreage to oil and gas wells will be allowed, and a provision for well location requirements.

(7) In conjunction with the proposed pool creation, the applicant further seeks the concomitant contraction of the Blinebry Oil and Gas Pool, the Tubb Oil and Gas Pool, and the Drinkard Oil Pool described as follows:

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## TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

|         | <u>B</u> ] | <u>linebry Pool</u> | Tubb Pool           | <u>Drinkard Pool</u> |
|---------|------------|---------------------|---------------------|----------------------|
| Section | 2:         | All                 | Lots 3-6,11-14, S/2 | All                  |
| Section | 3:         | All                 | All                 | All                  |
| Section | 4:         | Lots 1,8,9,1        | 6 Lots 1,8,9,16     | Lot 9                |
| Section | 10:        | : All               | All                 | All                  |
| Section | 11:        | : SW/4              | SW/4                | SW/4                 |
| Section | 14:        | : NW/4              | NW/4                | NW / 4               |
| Section | 15:        | : All               | All                 | All                  |
| Section | 22:        | : All               | All                 | All                  |
| Section | 23:        | : All               | All                 | All                  |

(8) The applicant testified that over the operational history of the Blinebry Oil and Gas Pool, the Tubb Oil and Gas Pool, and the Drinkard Oil Pool, the Division has allowed commingling of these pools within the wellbores of numerous wells in the subject area.

(9) This commingling has resulted in the development of effective communication between the three pools, which has in turn resulted in similar formation pressures and production responses.

(10) Consequently, the vertical interval containing the Blinebry, Tubb, and Drinkard formations more closely resembles, at this late stage of primary development, one common single source of supply.

(11) The applicant further presented evidence and testimony which indicates that secondary recovery operations conducted simultaneously within the Blinebry, Tubb, and Drinkard formations would be the most efficient method of operation and would result in the recovery of the maximum amount of secondary reserves from the subject formations within the subject area.

(12) In order to prevent waste caused by the loss of secondary reserves resulting from inefficient secondary recovery operations, and by the unnecessary duplication of facilities required to conduct separate waterflood operations within the three subject formations, the application of Shell Western E & P, Inc. for the creation of a new oil and gas pool for the purpose of conducting secondary recovery operations should be approved. -4-Case No. 9230 Order No. R-8539

(13) In order to assure the orderly development and operation of the proposed secondary recovery project within the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool, special rules and regulations, including, but not limited to, well location requirements, oil and gas well spacing, classification, acreage dedication, and recompletions, and reporting procedures should be adopted for a temporary period.

(14) Within the proposed pool boundaries of the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool, there currently exist a number of wells classified as gas wells producing from the Blinebry and/or the Tubb Oil and Gas Pools.

(15) The applicant proposes to continue to operate these wells (shown on Exhibit "A" attached to this order) as gas wells within the Blinebry and/or Tubb Oil and Gas Pools and further proposes that these wells continue to be operated subject to the gas proration rules and regulations contained in Division Order No. R-8170.

(16) The applicant further proposed to recomplete a number of wells currently classified as oil wells to gas wells producing from the Blinebry and/or Tubb formations; (these wells are also shown on Exhibit "A").

(17) The applicant should be allowed to continue to operate the currently existing gas wells, and the proposed recompleted gas wells in the manner described in Finding No. (15) above, subject to certain restrictions which will ensure that remaining primary gas reserves within the Blinebry and/or Tubb Oil and Gas Pools are recovered and which will further ensure that correlative rights will not be violated thereby.

(18) The applicant further requested that the special rules and regulations allow for simultaneous dedication of acreage to oil and gas wells within the pool boundaries.

(19) Testimony by the applicant indicated that the existing and proposed gas wells as shown on Exhibit "A" were or will be producing from isolated gas zones within the Blinebry and Tubb formations and that the production from oil and gas wells which would both occupy a proration unit would not in effect be producing from the same zones. -5-Case No. 9230 Order No. R-8539

(20) The effect of allowing simultaneous dedication of acreage within the pool would result in a more efficient and complete production of remaining primary gas reserves, thereby preventing waste, and should be approved.

(21) The applicant further requested at the hearing that a gas-oil ratio limitation of 6000 cubic feet of gas per barrel of oil be established for the subject pool.

(22) Said gas-oil ratio limitation would also allow the applicant to more efficiently and completely produce remaining primary reserves in the interim period prior to initiating waterflood operations and should be approved.

(23) The special rules and regulations promulgated herein should only apply to the area to be utilized by the applicant for secondary recovery operations and further, the horizontal limits of the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool should be expanded only after notice and hearing, and any expansion of said pool should be only for the purpose of expanding or approving secondary recovery operations within the pool.

(24) The temporary special rules and regulations promulgated herein should remain in effect for a period of three years, at which time this case should be reopened to allow the applicant to appear and show cause why the special rules and regulations for the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool should not be rescinded.

## IT IS THEREFORE ORDERED THAT:

(1) A new pool for Blinebry, Tubb, and Drinkard production is hereby created and designated the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool comprising vertical limits defined from a depth of 5530 feet (2101 feet sub-sea) to a depth of 6680 feet (3251 feet sub-sea) on the log run June 21, 1951 on the Shell Argo Well No. 8 located 660 feet from the South line and 2310 feet from the West line of Section 15, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, and with horizontal limits comprised of the following described acreage: -6-Case No. 9230 Order No. R-8539

### TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

Section 2: All Section 3: All Section 4: Lots 1, 8, 9, 16 Section 10: All Section 11: SW/4 Section 14: NW/4 Section 15: All Section 22: All Section 23: All

(2) The horizontal boundaries of the Blinebry Oil and Gas Pool, the Tubb Oil and Gas Pool, and the Drinkard Oil Pool, are hereby contracted by the deletion of the following described acreage:

#### TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

| Blinebry         | <u>y Pool</u> | <u>Tubb Pool</u> | Drinkard Pool |
|------------------|---------------|------------------|---------------|
| Section 2: All   | Lots 3        | 3-6,11-14, S/2   | All           |
| Section 3: All   |               | All              | All           |
| Section 4: Lots  | .,8,9,16 Lo   | ots 1,8,9,16     | Lot 9         |
| Section 10: All  |               | All              | All           |
| Section 11: SW/4 |               | SW/4             | SW/4          |
| Section 14: NW/4 |               | NW/4             | NW/4          |
| Section 15: All  |               | All              | All           |
| Section 22: All  |               | All              | All           |
| Section 23: All  |               | All              | All           |

(3) Temporary special Rules and Regulations governing operations within the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS FOR THE NORTH EUNICE BLINEBRY-TUBB-DRINKARD OIL AND GAS POOL

RULE 1. Each well completed or recompleted in the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool or in the Blinebry, Tubb, or Drinkard formations within the designated pool boundaries shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth. -7-Case No. 9230 Order No. R-8539

> RULE 2. A producing oil well within the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool shall have dedicated to it a tract consisting of 40 acres comprised of a governmental quarter-quarter section or lot and shall be located no closer than 330 feet to any outer boundary of such tract.

RULE 3. The Division Director shall have authority to grant exceptions to the well location requirements of Rule 2 in accordance with the terms and provisions of General Rule 104(F), and provided the requirements contained in said rule are complied with.

RULE 4. A producing gas well within the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool shall have dedicated to it a tract consisting of 160 acres comprised of contiguous governmental quarter-quarter sections or lots.

RULE 5. All gas wells within the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool shall be subject to the gas proration rules contained in the Rules and Regulations For Prorated Gas Pools (Division Order No. R-8170), and shall further be governed by all other rules contained in the Special Rules and Regulations for the Blinebry Oil and Gas Pool and the Tubb Oil and Gas Pool, whichever is applicable, not inconsistent with the rules promulgated herein.

RULE 6. Acreage within the pool may be simultaneously dedicated to oil and gas wells provided that; any acreage assigned to a gas well within the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool shall not be located closer than 1320 feet to the pool boundaries unless such acreage would be contiguous with a Blinebry and/or Tubb gas proration unit, whichever is applicable, located outside the pool boundaries.

RULE 7. An oil well in the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool shall be a well producing from the vertical and horizontal limits of the pool and not classified as a gas well.

RULE 8. A gas well in the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool shall be a well producing from defined gas intervals within the Blinebry or Tubb formations, and shall not be subject to any specific gas-liquid hydrocarbon ratio; an oil -8-Case No. 9230 Order No. R-8539

> well in the pool may be recompleted as a gas well in the Blinebry or Tubb formation provided the operator of such well makes application to and receives approval from the supervisor of the Division's Hobbs District Office.

> RULE 9. Commingling of production in the wellbore of any well producing from both oil zones and gas zones in the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool is prohibited.

> RULE 10. Any gas well producing from both the Blinebry and Tubb formations and classified for at least one year as marginal in both pools may be downhole commingled provided that adequate production history from both zones is available to accurately determine an allocation formula, and the operator has made application to the Division as per Rule No. 303 (C) of the Division's Rules and Regulations.

> RULE 11. The limiting gas-oil ratio for wells producing from oil zones in the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool shall be 6000 cubic feet of gas per barrel of oil.

> RULE 12. Oil wells in the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool shall receive oil and casinghead gas allowables as provided in either Division General Rule 701 F(3) or Rules 503, 505, and 506.

> RULE 13. The operator shall consult with the Division's Hobbs District Office for procedures to be used for obtaining approval of well conversions, recompletions, abandonment of zones, etc., and for production reporting within the pool.

(5) The existing gas wells and the proposed recompleted gas wells shown on Exhibit "A" attached to this order are hereby classified as gas wells in the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool.

(6) Upon recompletion of the proposed gas wells shown on Exhibit "A", the applicant shall file with the Division the necessary completion reports in order that these wells may be added to the gas proration schedule. -9-Case No. 9230 Order No. R-8539

(7) The effective date of this order shall be November 1, 1987.

(8) The horizontal limits of the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool shall be expanded only after notice and hearing, and any expansion of said pool shall be only for the purpose of expanding or approving any secondary recovery operations within the pool.

(9) This case shall be reopened at an examiner hearing in November, 1990, at which time the applicant shall appear and show cause why the special rules and regulations promulgated herein should not be rescinded.

(10) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION 01 WILLIAM J. LEMAX Director

SEAL

| EXHI  | "A" |        |
|-------|-----|--------|
| CASE  | NO. | 9230   |
| ORDER | NO. | R-8539 |

## NORTHEAST DRINKARD UNIT EXISTING GAS WELLS

| OPERATOR, | UNIT     | LOCATION             | PROPOSED   |
|-----------|----------|----------------------|------------|
| WELL NAME | WELL NO. | <u>(T-21S R-37E)</u> | COMPLETION |

SECTION 15:

| Shell Western<br>Argo No. 5       | 705 | 330 FSL & 2310 FWL  | Blinebry/Tubb |
|-----------------------------------|-----|---------------------|---------------|
| Marathon Oil<br>Warlick "C" No. 1 | 706 | 1980 FSL & 1980 FEL | Blinebry/Tubb |

SECTION 22:

Shell Western Turner No. 10

902 2080 FSL & 1650 FWL Blinebry/Tubb

Note: The three wells described above are currently completed in the Tubb formation only.

## PROPOSED RECOMPLETED GAS WELLS

SECTION 2:

| Meridian Oil<br>State "2" No.  | 8  | 116 | 5790 FSL | & | 660 FWL  | Blinebry |
|--------------------------------|----|-----|----------|---|----------|----------|
| Meridian Oil<br>State "2" No.  | 3  | 215 | 3175 FSL | & | 660 FWL  | Blinebry |
| Shell Western<br>State "2" No. | 15 | 216 | 3546 FNL | & | 1650 FWL | Blinebry |

SECTION 3:

Shell Western Taylor Glenn No. 9 107 1585 FNL & 1980 FWL Blinebry Conoco Hawk B-3 No. 12 305 1980 FSL & 1980 FEL Blinebry/Tubb

## SECTION 4:

Shell Western Livingston No. 12 201 4520 FSL & 660 FEL Blinebry

# SECTION 10:

| Conoco<br>Hawk B-10 No. 2<br>Conoco<br>Hawk B-10 No. 9<br>Meridian Oil | 404<br>405 | 1980 FNL & 2310 FWL<br>660 FNL & 1980 FEL | Blinebry<br>Blinebry |
|--|------------|---|----------------------|
| Dauron No. 2   | 409        | 660 FNL & 525 FEL                         | Blinebry             |
| SECTION 11:  |            |   |                      |
| Meridian Oil<br>Gutman No. 2   | 510        | 1980 FSL & 990 FWL                        | Blinebry/Tubb        |
| SECTION 15:  |            |   |                      |
| Cities Service<br>State "S" No. 1<br>Cities Service                    | 602        | 1980 FNL & 660 FWL                        | Blinebry             |
| State "S" No. 5  | 608        | 1980 FNL & 1880 FWL                       | Tubb                 |
| Shell Western<br>State "15" No. 1                                      | 611        | 1980 FNL & 1978 FEL                       | Blinebry/Tubb        |
| Marathon Oil<br>Warlick "C" No. 9                                      | 710        | 990 FSL & 990 FEL                         | Blinebry/Tubb        |
| SECTION 22:  |            |   |                      |
| Shell Western<br>Argo "A" No. 11<br>Shell Western                      | 804        | 1650 FNL & 1650 FWL                       | -                    |
| Turner No. 14  | 906        | 2310 FSL & 2310 FEL                       | Blinebry/Tubb        |
| SECTION 23:  |            |   |                      |
| Shell Western<br>Sarkeys No. 2   | 913        | 1980 FSL & 1980 FWL                       | Blinebry/Tubb        |