

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. 10052
Order Nos. R-8539-A
R-8541-B

APPLICATION OF SHELL WESTERN E & P
INC. FOR AMENDMENT OF DIVISION ORDER
NOS. R-8539 AND R-8541, AS AMENDED,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on August 22, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 24th day of September, 1990, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being 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) By Order No. R-8539 dated November 9, 1987, issued in Case No. 9230 upon application of Shell Western E & P Inc., the Division created and defined the North Eunice Blinbry-Tubb-Drinkard Oil and Gas Pool for the purpose of conducting secondary recovery operations, and further promulgated Temporary Special Rules and Regulations including provisions whereby Blinbry and Tubb gas wells would be separately classified and produced in accordance with the Rules and Regulations for the Prorated Gas Pools of New Mexico as promulgated by Division Order No. R-8170, as amended.

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(3) By Order No. R-8541, as amended, dated November 9, 1987, issued in Case No. 9232, the Division authorized Shell Western E & P Inc. to institute a waterflood project on its Northeast Drinkard Unit within said North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool.

(4) The applicant, Shell Western E & P Inc., seeks to delete Rule Nos. 4 through 10 of the Special Rules and Regulations for the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool, which rules pertain to Blinebry and Tubb gas well classification and production.

(5) In addition, the applicant seeks to delete Rule Nos. 11 and 12, which rules established a limiting gas-oil ratio of 6,000 cubic feet of gas per barrel of oil and oil and gas allowables in accordance with Division General Rule Nos. 701 (F)(3), 503, 505, and 506.

(6) The applicant further seeks to amend Division Order No. R-8541, as amended, by eliminating Ordering Paragraph Nos. (8) and (9) which prohibit injection into gas bearing zones, and which provide that an adequate number of wells be utilized for Blinebry and Tubb gas production.

(7) In addition, pursuant to the provisions of Division Order No. R-8539, the applicant is prepared (via Case No. 10052 in lieu of reopening Case No. 9230) to present evidence and testimony to show cause why the Temporary Rules and Regulations for the subject pool should not be rescinded.

(8) Rule Nos. 4 through 10 and Ordering Paragraph Nos. (8) and (9) as described above, were incorporated into said Order Nos. R-8539 and R-8541, respectively, in order to protect and provide a means by which remaining gas cap reserves within the Blinebry and Tubb formations could be recovered and to further ensure that these gas cap reserves would not be watered out during coexistent waterflood operations.

(9) Rule Nos. 11 and 12 were incorporated into said Order No. R-8539 in order to allow more efficient and complete production of primary reserves within the pool during the interim period prior to commencement of injection operations.

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(10) Subsequent to the issuance of Order Nos. R-8539 and R-8541, as amended, the applicant has obtained extensive additional reservoir data which now indicates that the gas caps which may have existed in this reservoir are now largely depleted.

(11) The evidence presented by the applicant indicates that approximately 95 percent of the gas currently being produced within the subject unit is produced from the depleted oil column and approximately 5 percent is being produced from remaining Blinebry and Tubb gas caps.

(12) According to further evidence it is currently uneconomic for the applicant to drill or recomplete wells to produce any remaining gas cap reserves due to the marginal gas production encountered in such wells.

(13) The applicant has demonstrated that the ultimate gas recovery within the unit (approximately 54.7 BCF-1987 forecast) will not be reduced by approval of the subject application.

(14) The applicant has further demonstrated that failure to waterflood depleted gas caps in the reservoir could decrease ultimate oil recovery because of the possibility that oil reserves will be displaced into depleted gas caps and not be recoverable in the future.

(15) The applicant intends, according to testimony, to continue producing these marginal Blinebry and Tubb gas wells until such time as they are depleted or until such time as mechanical failures force the abandonment of such wells.

(16) In order to prevent the drilling of unnecessary wells, promote effective and efficient secondary recovery operations, and to otherwise prevent waste and protect correlative rights, Rule Nos. 4 through 10, 11, and 12 of the Special Rules and Regulations for the North Eunice Blinebry-Tubb Drinkard Oil and Gas Pool and Ordering Paragraph Nos. (8) and (9) of Division Order No. R-8541, as amended, should be rescinded.

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(17) The evidence and testimony by the applicant further indicates that the pool rules currently in effect, with the exception of those described in Finding No. (16) above, are effective in promoting orderly development of secondary reserves within the subject pool, and should therefore be made permanent.

(18) The subject pool should be redesignated the North Eunice Blinebry-Tubb-Drinkard Pool.

(19) In order to protect the correlative rights of those operators who may be producing gas from the Blinebry and Tubb zones outside the boundary of the North Eunice Blinebry-Tubb-Drinkard Pool, the applicant should be required to notify such affected offset operators in the event the applicant intends to:

- a) Add perforations to any well currently producing from the gas bearing portion of the Blinebry and/or Tubb formation.
- b) Perforate the gas bearing portion of the Blinebry and/or Tubb formation in any currently authorized or subsequently approved injection well.

(20) In accordance with Division General Rule No. 701 (F)(3), the Northeast Drinkard Unit Waterflood Project should be assigned an oil and gas allowable equal to the project's ability to produce.

(21) The amended Rules and Regulations for the North Eunice Blinebry-Tubb-Drinkard Pool should remain in effect until further order of the Division.

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IT IS THEREFORE ORDERED THAT:

(1) The North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool, heretofore created and defined by Division Order No. R-8539, Lea County, New Mexico, is hereby redesignated the North Eunice Blinebry-Tubb-Drinkard Pool.

(2) The Special Rules and Regulations for the North Eunice Blinebry-Tubb-Drinkard Pool, as originally promulgated by Division Order No. R-8539 are hereby superseded by the following:

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

- RULE 1. Each well completed or recompleted in the North Eunice Blinebry-Tubb-Drinkard Pool or in the Blinebry, Tubb, or Drinkard formation within the designated vertical and horizontal pool boundaries shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.
- RULE 2. A producing oil well within the North Eunice Blinebry-Tubb-Drinkard 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.

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RULE 4. 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.

RULE 5. The supervisor of the Hobbs district office of the Division may grant requests to add perforations to any well currently producing from the gas bearing portion of the Blinbry and/or Tubb formation provided that the applicant includes proof that all affected offset operators have been notified of such requests and that no objections have been received by the Division within 20 days of such notification.

RULE 6. The Division Director may grant requests to perforate the gas bearing portion of the Blinbry and/or Tubb formations in any currently authorized or subsequently approved injection well provided that all affected offset operators have been notified of such requests and that no objections have been received by the Division within 20 days of such notification.

(3) Ordering Paragraph Nos. (8) and (9) of Division Order No. R-8541, as amended, are hereby deleted.

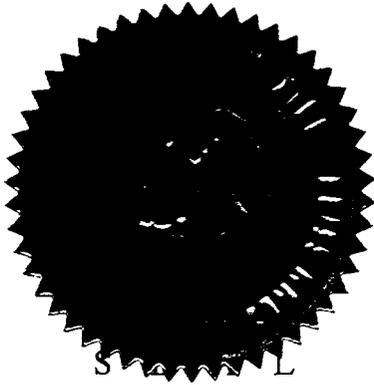
(4) In accordance with Division General Rule No. 701 (F)(3), the Northeast Drinkard Unit Waterflood Project shall be assigned an oil and gas allowable equal to the project's ability to produce.

(5) All other provisions contained within Division Order Nos. R-8539 and R-8541, as amended, shall remain in full force and effect.

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

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



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

William J. Lemay
WILLIAM J. LEMAY
Director

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. 9232
Order No. R-8541

THE APPLICATION OF SHELL WESTERN
E & P, INC. FOR A WATERFLOOD
PROJECT, 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 9th 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 Cases 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. (Shell), seeks authority to institute a waterflood project in its Northeast Drinkard Unit Area by the injection of water into the unitized interval which shall include the oil-bearing portions of the Blinbry, Tubb, and Drinkard formations which extend from an upper limit of 5530 feet (2101 feet sub-sea) to a lower limit 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, through 37 initial injection wells as shown on Exhibit "A" attached to this order.

(4) The proposed initial injection wells are planned conversions of existing producing wells.

(5) The applicant proposes to utilize a five spot injection pattern within the proposed waterflood project.

(6) The producing formations in the proposed project area are in an advanced stage of depletion and the area is suitable for waterflooding.

(7) The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste, and should otherwise protect correlative rights.

(8) The applicant should be required, insofar as is practical, to avoid injection into any gas-bearing zones undergoing primary production within any or all of the three formations and to otherwise restrict injection to the oil-bearing portions of the pool.

(9) Evidence presented at the hearing shows the gas-bearing portions of the Blinebry formation are limited to the upper two producing zones but that gas-bearing portions in the Tubb formation are distinct zones which are separated from the oil-bearing zones by permeability barriers.

(10) Water injection into the several formations comprising the unitized formation can be conducted without endangering the gas reserves and said gas reserves can be recovered concurrently with the enhanced oil recovery project provided adequate precautions are taken.

(11) Said gas wells should continue to be prorated as Blinebry or Tubb, as the case may be, gas wells and receive allowables equal to the wells in said pools as shown on the monthly proration schedules.

(12) In order to prevent loss of recoverable gas reserves, no gas well in the Tubb or Blinebry formations should be entered for recompletion to other use until a suitable replacement well has been completed and connected to the appropriate gas gathering facility.

(13) There are twelve wells, shown on Exhibit "B" attached to this order, which are located within or adjacent to the proposed project which may not have been completed or cemented in such a manner which will assure that their wellbores will not serve as a conduit for movement of injected fluid out of the injection interval.

(14) Prior to initiating injection within one-half mile of any of the wells shown on Exhibit "B", the applicant should be required to perform remedial cement operations on said wells in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid to the satisfaction of the supervisor of the Hobbs district office of the Division.

(15) There are also nine wells, shown on Exhibit "C" attached to this order, located within or adjacent to the proposed project which require further investigation in order to determine if they are completed and cemented in such a manner that will assure that their wellbores will not serve as a conduit for movement of injected fluid out of the injection interval.

(16) Prior to initiating injection within one-half mile of any of the wells shown on Exhibit "C", the applicant should be required to present additional calculations, temperature surveys, cement bond logs, or other pertinent information to the supervisor of the Division's district office in Hobbs who, after review of such additional information, may require additional testing, logging, or remedial cement operations to be conducted on the subject wells.

(17) The operator should otherwise take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(18) The injection wells or injection pressurization system should be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth from the surface to the top injection perforation in any injection well, but the Division Director should have authority to increase said pressure limitation upon a proper showing that said pressure increase would not result in the fracturing of the injection formation or confining strata.

(19) Prior to initiating injection into any of the injection wells, the applicant should be required to pressure test the casing in each of the proposed injection wells from the surface to the proposed packer-setting depth to assure the integrity of said casing.

(20) Subsequent to the hearing, J. R. Cone, an offset operator to the proposed project who appeared at the hearing, requested that the applicant not be allowed to inject into Wells Nos. 615, 709, and 808 until such time as the applicant files with the Division an approved lease line agreement between Shell and J. R. Cone.

(21) This request is fair and reasonable and should be granted.

(22) The application should be approved and the project should be governed by the provisions of Rules 701 through 708 of the Oil Conservation Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Shell Western E & P, Inc., is hereby authorized to institute a waterflood project in the Northeast Drinkard Unit Area (described in Ordering Paragraph No. (2) of Division Order No. R-8540), by the injection of water into the unitized interval which shall include the Blinebry, Tubb, and Drinkard formations which extend from an upper limit of 5530 feet (2101 feet sub-sea) to a lower limit 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, through 37 initial injection wells as shown on Exhibit "A" attached to this order.

(2) The injection wells herein authorized and/or the injection pressurization system shall be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth from the surface to the top injection perforation, provided however, the Division Director may authorize a higher surface injection pressure upon satisfactory showing that such higher pressure will not result in fracturing of the injection formation or confining strata.

(3) Injection into each of said wells shall be through plastic or cement-lined tubing set in a packer which shall be located as near as practicable to the uppermost perforations, or, in the case of open hole completions, as near as practicable to the casing-shoe; the casing-tubing annulus shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak-detection device.

(4) Prior to initiating injection within one-half mile of any of the wells shown on Exhibit "B" attached to this order, the applicant shall perform remedial cement operations on said wells shown on Exhibit "B" in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid to the satisfaction of the supervisor of the Hobbs district office of the Division.

(5) Prior to initiating injection within one-half mile of any of the wells shown on Exhibit "C" attached to this order, the applicant shall present additional calculations, temperature surveys, cement bond logs, or other pertinent information to the supervisor of the Division's district office in Hobbs who, after review of such additional information, may require additional testing, logging, or remedial cement operations to be conducted on the subject wells.

(6) Prior to initiating injection into any of the injection wells shown on Exhibit "A", the applicant shall pressure-test the casing in each of the proposed injection wells from the surface to the proposed packer setting depth to assure the integrity of said casing.

(7) The applicant shall notify the supervisor of the Hobbs district office of the Division prior to performing any remedial cement operations on the wells shown on Exhibit "B" or Exhibit "C" or prior to conducting any casing pressure-test on any injection well shown on Exhibit "A".

(8) The applicant shall, insofar as is practical, avoid injection into any gas-bearing zones undergoing primary production within any or all of the three formations and otherwise restrict injection to the oil-bearing portions of the pool.

(9) No gas well in the Blinbry or Tubb formation shall be entered for recompletion for other use until a suitable replacement well has been completed and connected to the appropriate gas gathering facility.

(10) The applicant shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing or packer in any of the injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(11) The authorized subject waterflood is hereby designated the Northeast Drinkard Unit Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

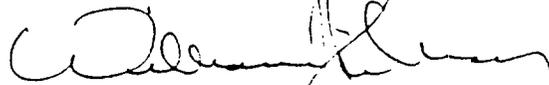
(12) Injection into Unit Well Nos. 615, 709, and 808 shall not commence until such time that the applicant files with the Division a signed lease line agreement between Shell and J. R. Cone.

(13) Monthly progress reports of the waterflood project herein authorized shall be submitted to the Division in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(14) 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



WILLIAM J. LEMAY
Director

S E A L

EXHIBIT "A"
CASE NO. 9232
ORDER NO. R-8541
NORTHEAST DRINKARD UNIT (NEDU)
UNIT INJECTION WELLS

| <u>WELL</u> | <u>UNIT WELL DESIGNATION</u> | <u>LOCATION (ALL IN T-21S, R-37E)</u> |
|--------------------------------------|----------------------------------|---|
| <u>SECTION 2:</u> | | |
| Meridian Oil State "2" No. 6 | 114 | 906 FNL, 660 FWL, Unit D |
| Meridian Oil State "2" No. 2 | 115 | 1896 FNL, 660 FWL, Unit E |
| Chevron Leonard No. 10 | 121 | 2220 FNL, 2307 FEL, Unit G |
| Meridian Oil State "2" No. 1 | 214 | 3300 FSL, 660 FWL, Unit M |
| Shell Western State "2" No. 16 | 218 | 3546 FNL, 1700 FWL, Unit K |
| Chevron Leonard No. 6 | 221 | 2983 FSL, 2317 FEL, Unit O |
| Shell Western State "2" No. 9 | 315 | 1980 FSL, 1880 FWL, Unit S |
| <u>SECTION 3:</u> | | |
| Shell Western Taylor Glenn No. 11 | 105 | 2080 FNL, 660 FWL, Unit E |
| Conoco Hawk B-3 No. 15 | 109 | 660 FNL, 1980 FEL, Unit B |
| Conoco Hawk B-3 No. 24 | 111 | 2232 FNL, 2310 FEL, Unit H |
| Shell Western Livingston No. 11 | 205 | 3300 FSL, 660 FWL, Unit M |
| Shell Western Taylor Glenn No. 1 | 206 | 3226 FNL, 1980 FWL, Unit K |
| Conoco Hawk B-3 No. 2 | 209 | 3150 FSL, 1650 FEL, Unit O |
| Shell Western Taylor Glenn No. 2 | 211 | 4620 FSL, 660 FEL, Unit I |
| Shell Western Livingston No. 1 | 303 | 1980 FSL, 1980 FWL, Unit S |
| Shell Western Livingston No. 2 | 307 | 660 FSL, 1980 FEL, Unit W |
| Conoco Hawk B-3 No. 7 | 309 | 1830 FSL, 660 FEL, Unit Q |

SECTION 10

| | | |
|------------------------------|-----|----------------------------|
| Conoco Hawk B-10 No. 10 | 403 | 460 FNL, 1980 FWL, Unit C |
| Conoco Hawk B-10 No. 8 | 407 | 1980 FNL, 2310 FEL, Unit G |
| Exxon NM "V" State No. 11 | 503 | 2080 FSL, 2080 FWL, Unit K |
| Exxon NM "V" State No. 3 | 506 | 660 FSL, 1980 FEL, Unit O |

SECTION 11

| | | |
|-----------------------|-----|--------------------------|
| Conoco Nolan No. 1 | 511 | 660 FSL, 660 FWL, Unit E |
|-----------------------|-----|--------------------------|

SECTION 14

| | | |
|--------------------------------|-----|---------------------------|
| Bravo Energy Eva Owen No. 1 | 615 | 1980 FNL, 660 FWL, Unit E |
|--------------------------------|-----|---------------------------|

SECTION 15

| | | |
|-----------------------------------|-----|----------------------------|
| Texaco State "S" No. 6 | 605 | 760 FNL, 1980 FWL, Unit C |
| Shell Western State "15" No. 3 | 610 | 2210 FNL, 2310 FEL, Unit G |
| Texaco State "S" No. 8 | 612 | 660 FNL, 660 FEL, Unit A |
| Shell Western Argo No. 3 | 703 | 1980 FSL, 1980 FWL, Unit K |
| Marathon Warlick No. 2 | 708 | 660 FSL, 1980 FEL, Unit O |
| Marathon Warlick No. 4 | 709 | 1980 FSL, 660 FEL, Unit I |

SECTION 22

| | | |
|---------------------------------|-----|----------------------------|
| Shell Western Argo "A" No. 3 | 803 | 660 FNL, 1980 FWL, Unit C |
| Chevron Eubank No. 8 | 807 | 1750 FNL, 2310 FEL, Unit G |
| Chevron Eubank No. 2 | 808 | 660 FNL, 660 FEL, Unit A |
| Shell Western Turner No. 12 | 904 | 2065 FSL, 1700 FWL, Unit K |
| Shell Western Turner No. 5 | 909 | 1980 FSL, 660 FEL, Unit I |

SECTION 23

| | | |
|------------------------------------|-----|----------------------------|
| Texaco Williamson No. 2 Arco | 811 | 1980 FNL, 660 FWL, Unit E |
| Barton No. 4 Arco | 815 | 1750 FNL, 1980 FEL, Unit G |
| Sarkeys No. 1 | 915 | 1980 FSL, 1980 FEL, Unit J |

EXHIBIT "B"
CASE NO. 9232
ORDER NO. R-8541

| <u>OPERATOR, WELL NAME, AND NUMBER</u> | <u>LOCATION</u> |
|---|---|
| Leonard Oil Elliot Federal No. 1 | 1659 FSL & 330 FWL Section 1, T-21S, R-37E |
| Stanolind Southland Royalty "C" No. 5 | 1980 FSL & 660 FEL Section 4, T-21S, R-37E |
| Conoco Inc. Hawk B-10 Federal No. 3 | 1980 FNL & 1980 FEL Section 10, T-21S, R-37E |
| Cities Service States No. 4 | 3390 FSL & 4520 FEL Section 15, T-21S, R-37E |
| Tidewater Oil State "S" No. 7 | 600 FNL & 990 FWL Section 15, T-21S, R-37E |
| Cities Service State "S" No. 6 | 2310 FNL & 990 FWL Section 15, T-21S, R-37E |
| Cities Service State "S" No. 3 | 3375 FSL & 3225 FEL Section 15, T-21S, R-37E |
| Gulf Oil Corporation Leonard "E" No. 5 | 2310 FNL & 330 FEL Section 16, T-21S, R-37E |
| Mid-Continent Petroleum State "15" No. 5 | 330 FSL & 330 FEL Section 16, T-21S, R-37E |
| Sunray Oil Elliott Federal "A" No. 3 | 980 FNL & 330 FEL Section 21, T-21S, R-37E |
| Sunray Oil Elliott Federal "A" No. 4 | 2030 FNL & 330 FEL Section 21, T-21S, R-37E |
| Gulf Oil Corporation Eubank "C" No. 8 | 1750 FNL & 2310 FEL Section 22, T-21S, R-37E |

EXHIBIT "C"
CASE NO. 9232
ORDER NO. R-8541

| <u>OPERATOR, WELL NAME, AND NUMBER</u> | <u>LOCATION</u> |
|---|---|
| Gulf Oil Corporation Harry Leonard "E" No. 6 | 1980 FSL & 1980 FEL Section 2, T-21S, R-37E |
| Shell Western E & P State "2" No. 20 | 990 FSL & 2300 FWL Section 2, T-21S, R-37E |
| Shell Western E & P State "2" No. 21 | 2205 FSL & 988 FWL Section 2, T-21S, R-37E |
| Shell Western E & P Livingston No. 3 | 560 FSL & 2030 FEL Section 3, T-21S, R-37E |
| Shell Western E & P Livingston No. 5 | 660 FSL & 330 FWL Section 3, T-21S, R-37E |
| Aztec Dauron No. 3 | 330 FNL & 990 FEL Section 10, T-21S, R-37E |
| Humble NM State "V" No. 11 | 2080 FSL & 2080 FWL Section 10, T-21S, R-37E |
| Tidewater Oil State "S" No. 6 | 760 FNL & 1980 FWL Section 15, T-21S, R-37E |
| Conoco Inc. Lockhart A-27 No. 3 | 330 FNL & 1650 FWL Section 27, T-21S, R-37E |

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

CASE NO. 9232
Order No. R-8541-A

APPLICATION OF SHELL WESTERN
E & P, INC. FOR A WATERFLOOD
PROJECT, LEA COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-8541, dated November 9, 1987, does not correctly state the intended order of the Division;

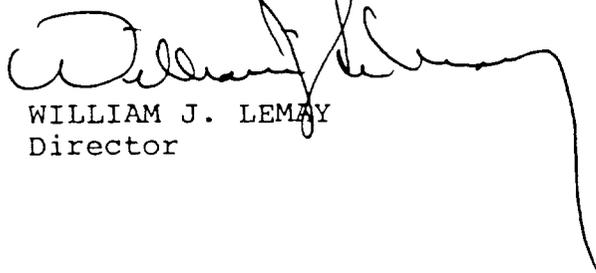
IT IS THEREFORE ORDERED THAT:

(1) The reference to the Chevron Eubank Well No. 8, described as being located 1750 feet from the North line and 2310 feet from the East line (Unit G) of Section 22, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, on page 2 of Exhibit "A" in Division Order No. R-8541 is hereby amended to read "Chevron Eubank Well No. 3 located 1980 feet from the North line and 2080 feet from the East line (Unit G) of said Section 22."

(2) The corrections set forth in this order be entered nunc pro tunc as of November 9, 1987.

DONE at Santa Fe, New Mexico, on this 11th day of October, 1988.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

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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 9th 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:

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:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

| <u>Blinebry Pool</u> | <u>Tubb Pool</u> | <u>Drinkard Pool</u> |
|--------------------------|---------------------|----------------------|
| Section 2: All | Lots 3-6,11-14, S/2 | All |
| Section 3: All | All | All |
| Section 4: Lots 1,8,9,16 | 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.

(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.

(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:

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

| <u>Blinebry Pool</u> | <u>Tubb Pool</u> | <u>Drinkard Pool</u> |
|--------------------------|---------------------|----------------------|
| Section 2: All | Lots 3-6,11-14, S/2 | All |
| Section 3: All | All | All |
| Section 4: Lots 1,8,9,16 | 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 |

(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.

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

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.

Case No. 9230
Order No. R-8539

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

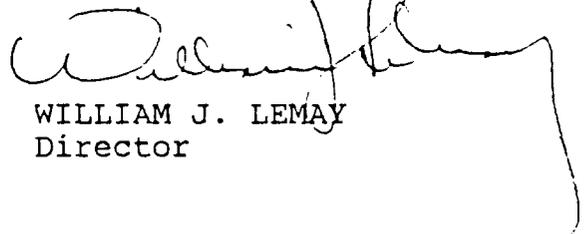
(8) The horizontal limits of the North Eunice Blinbry-Tubb-Drinkard Oil and Gas Pool shall be expanded only after notice and hearing, and any expansion of said pool shall be only for the purpose of expanding or approving any secondary recovery operations within the pool.

(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



WILLIAM J. LEMAY
Director

S E A L

EXHIBIT "A"
CASE NO. 9230
ORDER NO. R-8539

NORTHEAST DRINKARD UNIT
EXISTING GAS WELLS

| <u>OPERATOR, WELL NAME</u> | <u>UNIT WELL NO.</u> | <u>LOCATION (T-21S R-37E)</u> | <u>PROPOSED COMPLETION</u> |
|-----------------------------------|--------------------------|-----------------------------------|--------------------------------|
| <u>SECTION 15:</u> | | | |
| Shell Western Argo No. 5 | 705 | 330 FSL & 2310 FWL | Blinebry/Tubb |
| Marathon Oil 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 State "2" No. 8 | 116 | 5790 FSL & 660 FWL | Blinebry |
| Meridian Oil State "2" No. 3 | 215 | 3175 FSL & 660 FWL | Blinebry |
| Shell Western 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 Hawk B-10 No. 2 | 404 | 1980 FNL & 2310 FWL | Blinebry |
| Conoco Hawk B-10 No. 9 | 405 | 660 FNL & 1980 FEL | Blinebry |
| Meridian Oil Dauron No. 2 | 409 | 660 FNL & 525 FEL | Blinebry |

SECTION 11:

| | | | |
|------------------------------|-----|--------------------|---------------|
| Meridian Oil Gutman No. 2 | 510 | 1980 FSL & 990 FWL | Blinebry/Tubb |
|------------------------------|-----|--------------------|---------------|

SECTION 15:

| | | | |
|-----------------------------------|-----|---------------------|---------------|
| Cities Service State "S" No. 1 | 602 | 1980 FNL & 660 FWL | Blinebry |
| Cities Service State "S" No. 5 | 608 | 1980 FNL & 1880 FWL | Tubb |
| Shell Western State "15" No. 1 | 611 | 1980 FNL & 1978 FEL | Blinebry/Tubb |
| Marathon Oil Warlick "C" No. 9 | 710 | 990 FSL & 990 FEL | Blinebry/Tubb |

SECTION 22:

| | | | |
|----------------------------------|-----|---------------------|---------------|
| Shell Western Argo "A" No. 11 | 804 | 1650 FNL & 1650 FWL | Blinebry/Tubb |
| Shell Western Turner No. 14 | 906 | 2310 FSL & 2310 FEL | Blinebry/Tubb |

SECTION 23:

| | | | |
|--------------------------------|-----|---------------------|---------------|
| Shell Western Sarkeys No. 2 | 913 | 1980 FSL & 1980 FWL | Blinebry/Tubb |
|--------------------------------|-----|---------------------|---------------|

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. 9231
Order No. R-8540

THE APPLICATION OF SHELL WESTERN
E & P, INC. FOR STATUTORY UNITIZATION,
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 9th 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 Cases 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. (Shell), seeks the statutory unitization, pursuant to the "Statutory Unitization Act", Sections 70-7-1 through 70-7-21, NMSA, (1978), of 4938 acres, more or less, embracing the entire North Eunice Blinbry-Tubb-Drinkard Oil and Gas Pool, Lea County, New Mexico, said unit to be known as the Northeast Drinkard Unit; the applicant further seeks approval of the Unit Agreement and the Unit Operating Agreement which were submitted in evidence as applicant's Exhibits Nos. 3 and 4 in this case.

(4) The proposed unit area should be designated the Northeast Drinkard Unit Area, and the horizontal limits of said unit area should be comprised of the following described federal, state, and fee lands in Lea County, New Mexico:

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

(5) At the time of the hearing, the applicant requested the deletion of the W/2 SW/4 of Section 24 (Tract 31) from the proposed unit area by mutual agreement between Shell and the current operator of said tract, Bison Petroleum Corporation.

(6) The vertical limits of the Northeast Drinkard Unit Area should comprise the interval containing the Blinebry, Tubb, and Drinkard formations as found 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 having been defined by the Division by Order No. R-8539, entered in Case No. 9230, as the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool.

(7) The unit area contains 30 separate tracts owned by 39 different working interests.

(8) At the time of the hearing, owners of over 89 percent of the working interest and owners of over 91 percent of the royalty interest were effectively committed to the unit.

(9) No interested party has objected to the proposed unitization or to the vertical limits of the proposed unit area.

(10) The North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool has reasonably been defined by development.

(11) The applicant proposes to institute a waterflood project for the secondary recovery of oil, gas, and associated liquifiable hydrocarbons within and to be produced from the proposed unit area.

(12) The proposed secondary recovery operations should result in the additional recovery of approximately 15 million barrels of oil.

(13) The unitized management, operation, and further development of the Northeast Drinkard Unit Area, as proposed, is feasible and reasonably necessary to effectively carry on secondary recovery operations and should substantially increase the ultimate recovery of oil and gas from the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool.

(14) The estimated additional investment costs of the proposed supplemental recovery operations are \$24.2 million dollars which include an estimated initial capital investment of \$18.7 million, and an additional \$5.5 million to be spent during subsequent years for additional equipment.

(15) The additional recovery to be derived from the proposed supplemental recovery operations will have a resultant net profitability over the aforesaid additional costs, on a present value basis at a ten percent discount rate after federal income taxes, of \$38.2 million.

(16) The estimated additional costs of the proposed operations (as described in Finding No. (14) above) will not exceed the estimated value of the additional oil and gas (as described in Finding No. (15) above) plus a reasonable profit.

(17) The applicant, the designated unit operator pursuant to the Unit Agreement and the Unit Operating Agreement, has made a good faith effort to secure voluntary unitization within the unit area.

(18) The Unit Agreement and the Unit Operating Agreement have been approved by those persons who will be required initially to pay at least 75% of the costs of unit operations, and also by the owners of at least 75% of the production or proceeds thereof that will be credited to

interests which are free of costs, such as royalties, overriding royalties, and production payments.

(19) The Phase I and Phase II Oil, and Phase I and Phase II Gas participation formulas contained in the Unitization Agreement, allocate the produced and saved unitized substances to the separately owned tracts in the unit area on a fair, reasonable, and equitable basis.

(20) Unitization and the adoption of the proposed unitized method of operation will benefit the working interest owners and royalty interest owners of the oil and gas rights within the Northeast Drinkard Unit Area.

(21) The granting of the application in this case will have no adverse effect upon the Blinebry Oil and Gas Pool, the Tubb Oil and Gas Pool, and the Drinkard Oil Pool, all located outside the proposed unit boundary.

(22) The applicant's Exhibits Nos. 3 and 4 in this case, being the Unit Agreement and the Unit Operating Agreement, respectively, should be incorporated by reference into this order.

(23) The Northeast Drinkard Unit Agreement and the Northeast Drinkard Unit Operating Agreement provide for unitization and unit operation of the Northeast Drinkard Unit Area upon terms and conditions that are fair, reasonable, equitable, and which include:

(a) an allocation to the separately owned tracts in the unit area of all oil and gas that is produced from the unit area and which is saved, being the production that is not used in the conduct of unit operations or not unavoidably lost;

(b) a provision for the credits and charges to be made in the adjustment among the owners in the unit area for their respective investments in wells, tanks, pumps, machinery, materials and equipment contributed to the unit operations;

(c) a provision governing how the costs of unit operations including capital investments shall be determined and charged to the separately-owned tracts and how said costs shall be paid including provisions for when, how, and by whom the unit production allocated to an owner who does not pay his share of the costs of

unit operations shall be credited to such owner, or the interest of such owner, and how his interest may be sold and the proceeds applied to the payment of his costs;

(d) a provision for carrying any working interest owner on a limited, carried or net-profits basis, payable out of production, upon terms and conditions which are just and reasonable, and which allow an appropriate charge for interest for such service payable out of production, upon such terms and conditions determined by the Division to be just and reasonable, and providing that any nonconsenting working interest owner being so carried shall be deemed to have relinquished to the Unit Operator all of his operating rights and working interest in and to the unit until his share of the costs, service charge and interest are repaid to the Unit Operator;

(e) a provision designating the Unit Operator and providing for the supervision and conduct of the unit operations, including the selection, removal or substitution of an operator from among the working interest owners to conduct the unit operations;

(f) a provision for a voting procedure for the decision of matters to be decided by the working interest owners in respect to which each working interest owner shall have a voting interest equal to his unit participation; and

(g) the time when the unit operations shall commence and the manner in which, and the circumstances under which, the operations shall terminate and for the settlement of accounts upon such termination.

(24) The statutory unitization of the Northeast Drinkard Unit Area is in conformity with the above findings, and will prevent waste and protect correlative rights of all owners of interest within the proposed unit area, and should be approved.

(25) The effective date of this order should be November 1, 1987, which coincides with the effective date of the Unit Agreement and the Unit Operating Agreement.

IT IS THEREFORE ORDERED THAT:

(1) The Northeast Drinkard Unit Area comprising 4938 acres, more or less, in the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool, Lea County, New Mexico, is hereby approved for statutory unitization pursuant to the Statutory Unitization Act, Sections 70-7-1 through 70-7-21 NMSA, (1978).

(2) The lands included within the Northeast Drinkard Unit Area shall comprise:

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

(3) The vertical limits of the Northeast Drinkard Unit Area shall comprise the interval containing the Blinebry, Tubb, and Drinkard formations as found 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 having been defined by the Division by Order No. R-8539, entered in Case No. 9230, as the North Eunice Blinebry-Tubb-Drinkard Oil and Gas Pool.

(4) The applicant shall institute a waterflood project for the secondary recovery of oil, gas, and all associated liquifiable hydrocarbons within and produced from the unit area, said waterflood project being the subject of Case No. 9232.

(5) The Northeast Drinkard Unit Agreement and the Northeast Drinkard Unit Operating Agreement, being applicant's Exhibits Nos. 3 and 4 in this case, are hereby approved, adopted, and incorporated by reference into this order.

(6) Since the persons owning the required percentage of interest in the unit area have approved or ratified the Unit Agreement and the Unit Operating Agreement, the interests of all persons within the unit area are unitized whether or not such persons have approved the Unit Agreement or the Unit Operating Agreement in writing.

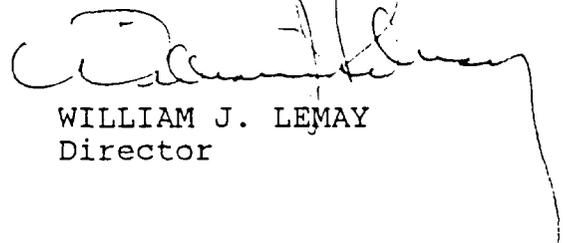
(7) The applicant as Unit Operator shall notify in writing the Division Director of any removal or substitution of said Unit Operator by any other working interest owner within the unit area.

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

(9) 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



WILLIAM J. LEMAY
Director

S E A L