

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. 10059  
Order No. R-7765-B

APPLICATION OF CHEVRON U.S.A. INC.  
FOR THE EXPANSION OF THE EUNICE  
MONUMENT SOUTH UNIT AREA AND FOR THE  
AMENDMENT OF DIVISION ORDER NO. R-7765,  
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 19<sup>th</sup> day of October, 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) Division Case Nos. 10059, 10060 and 10061 were consolidated at the time of the hearing for the purpose of testimony.

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(3) By Order No. R-7765, as amended, dated December 27, 1984, the Division, upon application of Gulf Oil Corporation, statutorily unitized, pursuant to the "Statutory Unitization Act," Sections 70-7-1 through 70-7-21, NMSA-1978, all mineral interests in the Eunice Monument Grayburg-San Andres Pool underlying the Eunice Monument South Unit Area which encompasses some 14,189.84 acres, more or less, in Lea County, New Mexico, for the purpose of instituting a waterflood project for the secondary recovery of oil and associated gas within said pool.

(4) Sufficient ratification of the plan for unit operations having been obtained by Gulf Oil Corporation, pursuant to the requirements of Division Order No. R-7765, as amended, unitized operations commenced at 7:00 a.m. on February 1, 1985.

(5) The applicant, Chevron U.S.A. Inc. (Chevron), seeks to amend said Division Order No. R-7765, as amended, to statutorily expand the Eunice Monument South Unit Area, pursuant to said "Statutory Unitization Act," Sections 70-7-1 through 70-7-21, NMSA-1978, to include an additional 3,000 acres, more or less, within the Eunice Monument Grayburg-San Andres Pool comprised of the following described acreage in Lea County, New Mexico:

TOWNSHIP 20 SOUTH, RANGE 36 EAST, NMPM

Section 10: E/2 E/2  
 Section 11: W/2, W/2 NE/4, SE/4  
 Section 13: W/2, S/2 SE/4  
 Section 14: All  
 Section 15: NE/4 NE/4  
 Section 23: All  
 Section 24: N/2, SW/4, W/2 SE/4

(6) The applicant proposed that the expanded area as described above be designated the Eunice Monument South Unit Expansion Area B (hereinafter referred to as Expansion Area B), and that the initial unit area be designated the Eunice Monument South Unit Area A (hereinafter referred to as Unit Area A).

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(7) Expansion Area B has been approved by the Bureau of Land Management and the Commissioner of Public Lands for the State of New Mexico subject to the approval of statutory unitization by the Division.

(8) The horizontal limits of Expansion Area B are reasonably defined by development and have a reasonable geologic relationship to the proposed unitized formations.

(9) In compliance with Section 4 of the Eunice Monument South Unit Agreement, the applicant has provided notice of the proposed expansion to all interest owners in Unit Area A as well as Expansion Area B, and has given said interest owners the opportunity to file written objections to the expansion, the boundaries, the basis for admission, the tract participation assigned to each tract, the effective date of the expansion, or any other matters concerning the unit.

(10) No interest owner in Unit Area A or Expansion Area B has objected to the proposed expansion.

(11) The proposed expansion does not change any percentage of allocation of either production or cost as established in the original order for any separately owned tract within Unit Area A, which is treated as a single tract for the purpose of this order.

(12) No interested party appeared and objected to the horizontal limits of Expansion Area B.

(13) The applicant has further proposed that the vertical limits of Expansion Area B coincide with the vertical limits of Unit Area A which extend from an upper limit described as 100 feet below mean sea level or at the top of the Grayburg formation, whichever is higher, to a lower limit at the base of the San Andres formation; the geologic markers having been previously found to occur at 3,666 feet and 5,283 feet, respectively, in Continental Oil Company's Meyer B-4 Well No. 23 located 660 feet from the South line and 1980 feet from the East line of Section 4, Township 21 South, Range 36 East, NMPM, Lea County, New Mexico, as recorded on the Welex Acoustic Velocity Log taken on October 30, 1962, said log being measured from a kelly drive bushing elevation of 3,595 feet above sea level.

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(14) The establishment of said vertical limits within Expansion Area B requires the amendment of the vertical limits of the Eumont Gas Pool and the Eunice Monument Grayburg-San Andres Pool. Said proposed amendment is the subject of companion Case No. 10061.

(15) No interested party appeared in opposition to the proposed vertical limits of Expansion Area B.

(16) Expansion Area B contains some eleven separate tracts owned by six different working interest owners.

(17) As of the date of the hearing, over 90 percent of the working and royalty interest owners of Expansion Area B were effectively committed to the unit or have balloted to join the unit.

(18) Chevron proposes to institute a waterflood project for the secondary recovery of oil and associated gas, condensate, and all associated liquefiable hydrocarbons within and to be produced from Expansion Area B, as presented in companion Case No. 10060.

(19) A technical committee was formed to evaluate aspects of unitization, operation, and conductance of secondary recovery operations through a stand alone unit or by expansion of the Eunice Monument South Unit. The committee has concluded that:

- a) the most economical and efficient method of accomplishing waterflood operations within Expansion Area B was to incorporate it into the Eunice Monument South Unit via unit expansion;
- b) based upon response to waterflooding in similar reservoirs, 48 percent of ultimate primary or 13.5 million barrels of additional (secondary) oil would be recovered by the institution of the proposed waterflood project within Expansion Area B.

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(20) The unitized management, operation, and further development of Expansion Area B, as proposed, is reasonable and necessary to effectively and efficiently carry on secondary recovery operations and will substantially increase the ultimate recovery of oil and gas from the unitized formations.

(21) The proposed unitized method of operation as applied to Expansion Area B is feasible and will result with reasonable probability in the increased recovery of substantially more oil from the unitized portion of the pool than would otherwise be recovered without unitization.

(22) The estimated additional costs of the proposed unitized operations within Expansion Area B will not exceed the estimated value of the additional oil and gas plus a reasonable profit.

(23) The applicant, the designated operator of Expansion Area B pursuant to the Unit Agreement and Unit Operating Agreement, has made a good faith effort to secure voluntary unitization within Expansion Area B.

(24) The participation formula for development of Expansion Area B will be the same as the formula utilized for the existing Unit Area A.

(25) The Division has previously found that the proposed participation formula will allocate unit production on a fair, reasonable, and equitable basis; however, the Division has further found that at such time as 64.2 million barrels of secondary oil have been produced from Unit Area A, the participation formula should be reviewed to determine if it will continue to allocate secondary or tertiary oil on a fair, reasonable, and equitable basis.

(26) At the time that the participation formula is reviewed, as described above, the applicant should also appear and demonstrate that the participation formula utilized in Expansion Area B continues to allocate proceeds from Expansion Area B in a fair and equitable manner or, in the alternative, present a new allocation formula prepared on the basis of new and/or enhanced reservoir data which may be obtained during the interim period, which new formula better allocates said proceeds.

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(27) The working interest owners of Unit Area A and the working interest owners of Expansion Area B have agreed that at least until such time as the aforementioned 64.2 million barrels of oil are recovered, Unit Area A and Expansion Area B will be operated separately, but each shall be operated under the terms and conditions of the Unit and Unit Operating Agreement, including any modifications thereof contained within the Addendum to the Ratification and Joinder for Expansion Area B.

(28) Unless changed by vote of the working interest owners and subsequent approval by the Division, all costs and expenses attributed to Expansion Area B should be paid by the working interest owners of Expansion Area B, and all production and revenues attributed to Expansion Area B should be distributed to the owners in said area in accordance with the tract participation and ownership established for Expansion Area B.

(29) According to applicant's evidence and testimony, existing injection facilities within Unit Area A will be utilized to carry out waterflood operations within Expansion Area B, and agreed upon share capital costs, operation, and maintenance of such injection facilities will be paid by the owners of Expansion Area B to those owners in Unit Area A.

(30) Chevron proposed a wellbore assessment method in the Unit Operating Agreement as an incentive to encourage the working interest owners in Expansion Area B to contribute the maximum number of existing useable wellbores to the unit.

(31) This assessment method, though not common, is used in other unit agreements.

(32) A wellbore useable for production or injection in the unitized interval must be made available for any proration unit within Expansion Area B which is to participate in the proposed waterflood operation, when such proration unit has or has had a well producing from the unitized interval.

(33) It is not unreasonable to penalize the owners of proration units upon which there is no such wellbore and upon which the unit operator must drill a well.

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(34) The proposed method of wellbore assessment is fair and reasonable.

(35) 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 Expansion Area B.

(36) The Eunice Monument South Unit Agreement and Unit Operating Agreement, as applied to Expansion Area B provide for unitization and unit operation of Expansion Area B upon terms and conditions that are fair, reasonable and 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 a provision providing 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 charged to such owners, of the interest of such owners, and how his interest may be sold and the proceeds applied to the payment of his costs;

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- d) a provision for carrying any working interest owner on a limited, carried or net-profits basis, payable out of production, upon such 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 allowing an appropriate charge for interest for such service payable out of such owner's share of production, 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 interests 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.

(37) The statutory unitization of the Eunice Monument South Unit Expansion Area B is in conformity with the above findings, and will prevent waste and protect the correlative rights of all owners of interest within the proposed unit area, and should be approved.

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IT IS THEREFORE ORDERED THAT:

(1) The Eunice Monument South Unit Area, previously approved and defined by Division Order No. R-7765, as amended, is hereby expanded, pursuant to the "Statutory Unitization Act", Section 70-7-1 through 70-7-21, NMSA-1978, to include some 3,000 acres, more or less, within the Eunice Monument Grayburg-San Andres Pool and comprised of the following described acreage in Lea County, New Mexico:

TOWNSHIP 20 SOUTH, RANGE 36 EAST, NMPM

Section 10: E/2 E/2  
 Section 11: W/2, W/2 NE/4, SE/4  
 Section 13: W/2, S/2 SE/4  
 Section 14: All  
 Section 15: NE/4 NE/4  
 Section 23: All  
 Section 24: N/2, SW/4, W/2 SE/4

(2) The acreage described above is hereby designated the Eunice Monument South Unit Expansion Area B (hereinafter referred to as Expansion Area B) and the initial unit area defined by Division Order No. R-7765, as amended, is hereby designated the Eunice Monument South Unit Area A (hereinafter referred to as Unit Area A).

(3) The vertical limits of Expansion Area B shall extend from an upper limit described as 100 feet below mean sea level or at the top of the Grayburg formation, whichever is higher, to a lower limit at the base of the San Andres formation; the geologic markers having been previously found to occur at 3,666 feet and 5,283 feet, respectively, in Continental Oil Company's Meyer B-4 Well No. 23 located 660 feet from the South line and 1980 feet from the East line of Section 4, Township 21 South, Range 36 East, NMPM, Lea County, New Mexico, as recorded on the Welex Acoustic Velocity Log taken on October 30, 1962, said log being measured from a kelly drive bushing elevation of 3,595 feet above sea level.

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(4) The applicant is hereby authorized to institute a waterflood project for the secondary recovery of oil and associated gas, condensate, and all associated liquefiable hydrocarbons within Expansion Area B, pursuant to the provisions set forth in Division Order No. R-7766-A.

(5) The Eunice Monument South Unit Agreement and the Eunice Monument South Unit Operating Agreement, as they pertain to Expansion Area B, presented as evidence in this case, are hereby incorporated by reference into this order.

(6) The Eunice Monument South Unit Agreement and Unit Operating Agreement, as they pertain to Expansion Area B provide for unitization and unit operation of Expansion Area B upon terms and conditions that are fair, reasonable and equitable and 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 a provision providing 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 charged to such owners, of the interest of such owners, and how his interest may be sold and the proceeds applied to the payment of his costs;

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- d) a provision for carrying any working interest owner on a limited, carried or net-profits basis, payable out of production, upon such 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 allowing an appropriate charge for interest for such service payable out of such owner's share of production, 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 interests 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,
- e) 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.

(7) This order shall not become effective unless and until seventy-five percent of the working interest and seventy-five percent of the royalty interest owners in Expansion Area B have approved the plan for unit operations as required by Section 70-7-8, NMSA, 1978 Compilation.

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(8) If the persons owning the required percentage of interest in Expansion Area B as set out in Section 70-7-8, NMSA, 1978 Compilation, do not approve the plan for unit operations within a period of six months from the date of entry of this order, this order shall cease to be of further force and effect and shall be revoked by the Division, unless the Division shall extend the time for ratification for good cause shown.

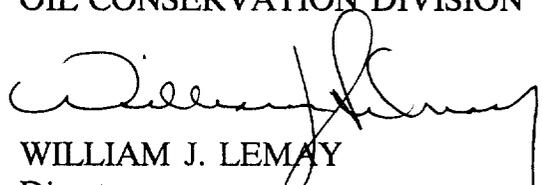
(9) When the persons owning the required percentage of interest in the Expansion Area B have approved the plan for unit operations, the interests of all persons in the Expansion Area B are unitized whether or not such persons have approved the plan of unitization in writing.

(10) Prior to distribution of the proceeds from secondary and tertiary production in excess of 64.2 million barrels from Unit Area A, the operator shall appear at a hearing and demonstrate that the formula approved by this order for Expansion Area B continues to allocate the proceeds from Expansion Area B production in a fair and equitable manner or, in the alternative, present for approval a new formula prepared on the basis of new and/or enhanced reservoir data which may be obtained during the interim period, which new formula better allocates said proceeds.

(11) 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

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