

**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. 10798  
Order No. R-9983**

**APPLICATION OF TEXACO EXPLORATION  
AND PRODUCTION INC. TO AUTHORIZE  
THE EXPANSION OF A PORTION OF ITS  
COOPER JAL UNIT WATERFLOOD PROJECT  
AND QUALIFY SAID EXPANSION FOR THE  
RECOVERED OIL TAX RATE PURSUANT TO  
THE "NEW MEXICO ENHANCED OIL RECOVERY  
ACT", JALMAT AND LANGLEIE-MATTIX POOLS,  
LEA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on August 12, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 6th day of October, 1993, 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 Nos. R-4019 and R-4020 issued in Case Nos. 4403 and 4404 on August 25, 1970, the Division authorized Reserve Oil and Gas Company to institute a waterflood project within the Langlie-Mattix and Jalmat Pools, respectively, within its Cooper Jal Unit Area, comprising some 2,581 acres within portions of Township 24 South, Ranges 36 and 37 East, NMPM, Lea County, New Mexico.

(3) Separate waterflood operations within the Cooper Jal Jalmat Waterflood Project and Cooper Jal Langmat Waterflood Project have been conducted utilizing 80-acre five spot injection patterns since 1970.

(4) The applicant, Texaco Exploration and Production Inc. (Texaco), being the successor operator of the Cooper Jal Unit, seeks an order pursuant to the Rules and Procedures for Qualifications of Enhanced Oil Recovery Projects and Certification for the Recovered Oil Tax Rate, as promulgated by Division Order No. R-9708, qualifying a portion of its Cooper Jal Jalmat Waterflood Project and Cooper Jal Langmat Waterflood Project, Lea County, New Mexico, for the recovered oil tax rate pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(5) The area proposed to be included within the EOR qualification area, hereinafter referred to as the "Project Area", is described as follows:

TOWNSHIP 24 SOUTH, RANGE 36 EAST, NMPM

Section 13: S/2  
Section 23: S/2 SE/4  
Section 24: All  
Section 25: N/2  
Section 26: NE/4 NE/4

TOWNSHIP 24 SOUTH, RANGE 37 EAST, NMPM

Section 18: SW/4 SW/4  
Section 19: W/2  
Section 30: NW/4

(6) Within the proposed Project Area, the applicant proposes to conduct waterflood operations on 40-acre five spot injection patterns within both the Langlie-Mattix and Jalmat Pools. Such action will require that the applicant drill and equip thirteen new producing wells, convert six producing wells to injection, convert six injection wells to producing wells, and convert eighteen injection wells to dual injection.

(7) Texaco requests certification of the Project Area on the contention that it has or will expand the use of enhanced oil recovery technology and will increase the size of the geographic and geologic area being flooded representing a unique area of activity.

(8) Geologic evidence indicates that the Jalmat Pool comprises the Tansill, Yates and the upper 250 feet of the Seven Rivers formation. The Langlie-Mattix Pool comprises the remaining portion of the Seven Rivers and all of the Queen formation.

(9) Geologic evidence further indicates that within the Yates and Seven Rivers formations there are numerous distinct producing sand intervals which are vertically segregated by non-porous dolomite or carbonate sections. In addition, the geologic evidence shows that the producing intervals are generally continuous across the unit; however, the thickness, uniformity, porosity and permeability may vary significantly resulting in areas of lateral discontinuity.

(10) Geologic variations as described above generally indicate that the 80-acre five spot injection pattern previously utilized within the Cooper Jal Jalmat and Cooper Jal Langmat Waterflood Projects may have been too large and likely resulted in substantial volumes of oil being left unrecovered.

(11) Reducing the waterflood pattern by opening new intervals in existing wells and by drilling additional wells will add new zones to these projects, improve the sweep efficiency of both projects, increase their size, and extend the project into new geographic areas of activity, thereby recovering reserves that without this modification would never be produced.

(12) By Order No. WFX-648 dated September 27, 1993, the Division authorized the applicant to expand its Cooper Jal Jalmat and Cooper Jal Langmat Waterflood Projects by converting nine wells to injection in the Jalmat and/or Langlie Mattix Pools.

(13) According to applicant's engineering evidence and testimony, the proposed expansion of the subject waterflood projects should result in the recovery of an additional 3.2 million barrels of oil from the Cooper Jal Unit Area.

(14) The proposed expansion of the Cooper Jal Jalmat and Cooper Jal Langmat Waterflood Projects will occur in three phases, and, according to testimony, the activity within each phase will overlap to some extent. Phase I is to be implemented in late 1993, Phase II in 1994 and Phase III in 1995.

(15) The capital costs for implementing Phases I, II, and III are projected to be \$3.472, \$2.860 and \$2.470 million dollars, respectively.

(16) The evidence presented demonstrates that the proposed waterflood expansions meet all criteria for EOR qualification.

(17) The application should be approved and the EOR Projects should be governed by the provisions of the "Rules and Procedures for Qualifications of Enhanced Oil Recovery Projects" and "Certification for Recovered Oil Tax Rate" as promulgated by Division Order No. R-9708.

(18) To assure that data is available to demonstrate that wells in each phase of these project expansions are experiencing a positive production response to this modification, the applicant should conduct sufficient tests on each zone in each producing well to establish an adequate base line against which any subsequent production response can be measured.

(19) The qualified Project Area should initially comprise the area described in Finding No. (5) above, provided however, the Phase I, II and III areas within the Project Area may be independently certified by the Division to the New Mexico Taxation and Revenue Department.

(20) To be eligible for the EOR credit, the operator should advise the Division when water injection commences within Phase I, II and III and at such time, request the Division certify such phases or areas to the New Mexico Taxation and Revenue Department.

(21) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Texaco Exploration and Production Inc. to qualify a portion of its Cooper Jal Jalmat and Cooper Jal Langmat Waterflood Projects, both located within the applicant's Cooper Jal Unit Area, as "Enhanced Oil Recovery Projects" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5), is hereby approved.

(2) The certified Project Area shall include the following described lands in Lea County, New Mexico, provided however, the Phase I, II and III areas within the Project Area may be independently certified by the Division to the New Mexico Taxation and Revenue Department:

**TOWNSHIP 24 SOUTH, RANGE 36 EAST, NMPM**

Section 13: S/2  
Section 23: S/2 SE/4  
Section 24: All  
Section 25: N/2  
Section 26: NE/4 NE/4

**TOWNSHIP 24 SOUTH, RANGE 37 EAST, NMPM**

Section 18: SW/4 SW/4  
Section 19: W/2  
Section 30: NW/4

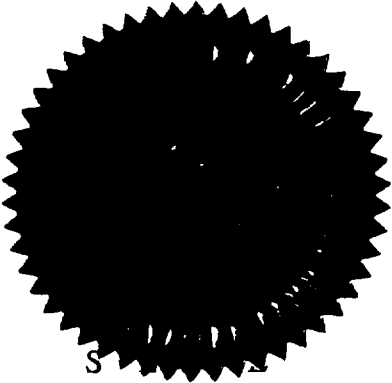
(3) The operator shall advise the Division when water injection commences within Phase I, II and III and, at such time, request the Division certify such phases or areas to the New Mexico Taxation and Revenue Department.

(4) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to The Department of Taxation and Revenue those lands and wells which are eligible for the credit.

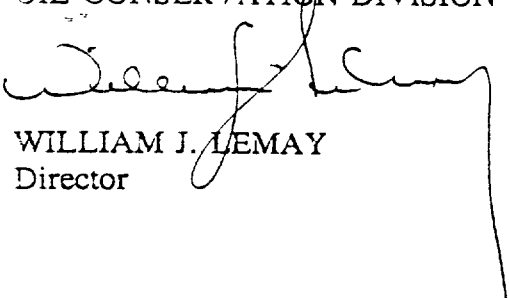
(5) The subject EOR projects shall be governed by the provisions of the "Rules and Procedures for Qualifications of Enhanced Oil Recovery Projects" and "Certification for Recovered Oil Tax Rate" as promulgated by Division Order No. R-9708.

(6) Jurisdiction of this cause is hereby 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