

**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. 10948  
Order No. R-10104**

**APPLICATION OF TEXACO EXPLORATION  
AND PRODUCTION 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 April 14, 1994, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 26th day of April, 1994, 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) The applicant, Texaco Exploration and Production Inc., seeks authority to institute a waterflood project on its W. H. Rhodes "B" Federal (NCT-2) Lease comprising the SE/4 of Section 28, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Yates-Seven Rivers formation, Rhodes Yates-Seven Rivers Pool, through the gross perforated interval from approximately 3,007 feet to 3,302 feet in its W. H. Rhodes "B" Federal (NCT-2) Well Nos. 5 and 6 located, respectively, in Units J and O of Section 28, and as further described on Exhibit "A" attached hereto.

(3) The proposed project area is adjacent to several secondary recovery projects currently operated by the applicant, including the Rhodes Yates Unit Waterflood Project, the W. H. Rhodes "B" Federal (NCT-1) Waterflood Project and the W. H. Rhodes "A" Federal Waterflood Project.

(4) Waterflood operations within the W. H. Rhodes "B" Federal (NCT-1), W. H. Rhodes "A" Federal and Rhodes Yates Unit Waterflood Projects commenced, respectively, in 1964, 1969 and 1973.

(5) The wells within the proposed project area are in an advanced state of depletion and should therefore be properly classified as "stripper wells".

(6) The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(7) Applicant's plan of operation for the project area includes utilizing the W. H. Rhodes "B" Federal (NCT-2) Well Nos. 3, 4, 5 and 6 as injection wells and utilizing the W. H. Rhodes "B" Federal (NCT-2) Well No. 7 as a producing well.

(8) The evidence and testimony indicate that the W. H. Rhodes "B" Federal (NCT-2) Well Nos. 3 and 4 have been approved for injection into the Rhodes Yates-Seven Rivers Pool by Division Order No. WFX-645 dated June 17, 1993. In addition, the W. H. Rhodes "B" Federal (NCT-2) Well No. 7, which is proposed to be drilled at an unorthodox location in Unit I of Section 28, was granted a location exception by Division Order No. NSL-3343 dated January 28, 1994.

(9) Although both of these Division orders were inadvertently issued prior to the actual establishment of a waterflood project within the SE/4 of Section 28, they should remain in full force and effect.

(10) The injection of water into the proposed injection wells should be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set within 100 feet of the uppermost injection perforations; the casing-tubing annulus in each well should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(11) Prior to commencing injection operations into the wells shown on Exhibit "A", the casing in each well should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(12) The injection wells or pressurization system should be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 600 psi.

(13) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(14) The operator should give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure tests in order that the same may be witnessed.

(15) The proposed waterflood project should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(16) The injection authority granted herein for the proposed injection wells should terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Texaco Exploration and Production Inc. for authority to institute a waterflood project on its W. H. Rhodes "B" Federal (NCT-2) Lease comprising the SE/4 of Section 28, Township 26 South, Range 37 East, NMPM, Lea County, New Mexico, by the injection of water into the Yates-Seven Rivers formation, Rhodes Yates-Seven Rivers Pool, through the gross perforated interval from approximately 3,007 feet to 3,302 feet in its W. H. Rhodes "B" Federal (NCT-2) Well Nos. 5 and 6 located, respectively, in Units J and O of Section 28, and as further described on Exhibit "A" attached hereto, is hereby approved.

(2) The applicant shall 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.

(3) Injection into the wells shown on Exhibit "A" shall be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set within 100 feet of the uppermost injection perforations; the casing-tubing annulus shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(4) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 600 psi.

(5) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(6) Prior to commencing injection operations, the casing in each well shall be pressure-tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(7) The operator shall give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure tests in order that the same may be witnessed.

(8) The applicant shall immediately notify the supervisor of the Hobbs District Office of the Division of the failure of the tubing, casing 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 steps as may be timely and necessary to correct such failure or leakage.

(9) The subject waterflood project is hereby designated the W. H. Rhodes "B" Federal (NCT-2) Waterflood Project, and the applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

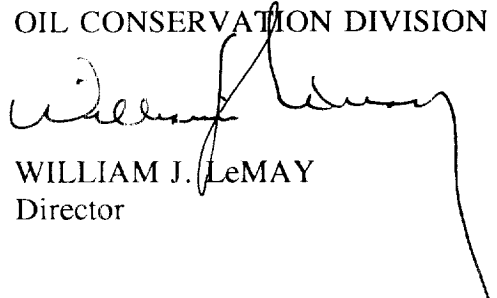
(10) The injection authority granted herein for the proposed injection wells shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(11) Division Order Nos. WFX-645 and NSL-3343 shall remain in full force and effect.

(12) 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. 10948

DIVISION ORDER NO. R-10104

W.H. RHODES "B" FEDERAL (NCT-2) WATERFLOOD PROJECT

APPROVED INJECTION WELLS

Well Name	Well No.	Location	Unit	S-T-R	Injection Perforations	Packer Depth	Tubing Size
W.H. Rhodes "B" Federal (NCT 2)	5	1980 'FSL. 1980' FEL	J	28-26S-37E	3007' - 3302'	2957'	2 3/8"
W.H. Rhodes "B" Federal (NCT-2)	6	660' FSL - 1880' FEL	O	28-26S-37E	3127' -3224'	3077'	2 3/8"