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. 9328
Order No. R-3221-D

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION ON ITS OWN MOTION TO CONSIDER THE AMENDMENT OF DIVISION ORDER NO. R-3221, WHICH PROHIBITS DISPOSAL OF WATER PRODUCED IN CONJUNCTION WITH THE PRODUCTION OF OIL OR GAS ON THE SURFACE OF THE GROUND, OR IN ANY OTHER PLACE OR MANNER WHICH WILL CONSTITUTE A HAZARD TO FRESH WATER SUPPLIES IN THE AREA ENCOMPASSED BY LEA, EDDY, CHAVES, AND ROOSEVELT COUNTIES, TO ADOPT STANDARDIZED PROCEDURES FOR HEARING SUCH APPLICATIONS.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 16, 1988, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 10th day of May, 1988, 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) On May 1, 1967, the Division entered Order No. R-3221, as amended, which prohibits the disposal of water, subject to minor exceptions, produced in conjunction with the production of oil or gas on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in

any manner which will constitute a hazard to fresh water supplies in the area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(3) The aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(4) The State Engineer has designated, pursuant to Section 70-2-12 (15), NMSA, (1978), all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(5) Subsequent to the issuance of said Order No. R-3221, as amended, a number of exceptions to said order have been granted by the Division upon a proper showing by the operator that disposal of produced water on the surface in specific areas will not constitute a hazard to fresh water supplies.

(6) By memorandum dated October 22, 1985, the Division Director set forth guidelines regarding the information which would be considered by the Division when evaluating whether or not an exception to said Order No. R-3221, as amended, should be granted.

(7) The aforementioned memorandum was issued by the Division Director to serve as a procedural guideline to be used by operators requesting an exception to said Order No. R-3221, as amended, and by Division Examiners in reviewing such applications.

(8) The Division, in the immediate case, seeks to incorporate into this order the information contained in the aforesaid memorandum in order to provide a permanent reference to be used by operators and the Division in the preparation and evaluation of requests for exceptions to Order No. R-3221, as amended.

(9) All applications for exceptions to said Order No. R-3221, as amended, should be in compliance with the aforesaid procedural guideline hereinafter referred to as "Hearings For Exceptions To Order No. R-3221" shown on Exhibit "A" attached to this order.

IT IS THEREFORE ORDERED THAT:

(1) The guideline hereinafter referred to as "Hearings For Exceptions To Order No. R-3221" shown on Exhibit "A" attached to this order is hereby adopted as standard procedure to be utilized by applicants for exceptions to Order No. R-3221, as amended, and by Division Examiners in evaluating such applications.

(2) 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

EXHIBIT "A"
ORDER NO. R-3221-D

HEARINGS FOR EXCEPTIONS TO ORDER NO. R-3221

Legal Considerations

(1) The Division is authorized by Section 70-2-12 B (15) of the Oil and Gas Act to make rules, regulations, and orders for the purpose of regulating "the disposition of water produced or used in connection with the drilling for or producing of oil or gas, or both, and to direct surface or subsurface disposal of such water in a manner that will afford reasonable protection against contamination of fresh water supplies designated by the State Engineer".

(2) The State Engineer by letter dated April 13, 1967, and pursuant to the above-named Section designated all underground water containing 10,000 milligrams per liter or less of total dissolved solids (TDS) as water to be protected, "except that this designation shall not include any water for which there is no present or reasonably foreseeable (Although not formally defined, the term "reasonably foreseeable" has been taken to mean a time period of not less than 200 years in the future, and in other instances to mean much longer times [thousands of years]) beneficial use that would be impaired by contamination."

(3) By letter dated July 10, 1985, the State Engineer reaffirmed the designation regarding groundwater and further designated all surface waters of all streams within the state for protection regardless of the quality of the water within any given reach. The letter also directed that no lakes or playas be contaminated although they may contain greater than 10,000 mg/l TDS unless it can be shown that contamination of the lake or playa will not adversely affect groundwater hydrologically connected to the lake or playa.

(4) In Finding No. (4) of Order No. R-3221, the OCC determined that fresh water supplies as designated by the State Engineer exist in substantially all areas where there is surface pit disposal and in substantially all the area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(5) Findings Nos. (5) and (6) of Order No. R-3221 determined that the disposal of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any other watercourse, constitutes a hazard to existing fresh water supplies, as designated by the State Engineer, in the vicinity of such disposal; and that such disposal, or any other disposal in any other place or manner which will constitute a hazard to any fresh water supplies should be prohibited in the above listed counties so as to afford reasonable protection of fresh water supplies.

(6) Finding No. (12) of Order No. R-3221 determined that produced water surface disposal of not more than one barrel per day per 40-acre tract served by the pits presented little hazard to fresh water.

(7) Paragraph No. (3) of Order No. R-3221 prohibited the disposal of produced water in the manner described in paragraph (5) above in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(8) As an amendment to Order No. R-3221, Order No. R-3221-B excepted major portions of Clayton Basin and Nash Draw in Lea and Eddy Counties based (1) on the existence of a number of large surface ponds, or lakes, containing extremely high concentrations of chlorides within the area [Finding (8)] and (2) on the determination that the reasonable protection against contamination of fresh water supplies by surface disposal of produced water would not be advanced by the enforcement of Order No. R-3221 in that area [Finding (11)].

Exception Procedures

An exception to Order No. R-3221, as amended, will be granted only if the applicant demonstrates that potentially usable ground water will not be affected. The following procedures should be followed in the preparation of and review of application for exceptions.

(1) Based upon the Findings in Order No. R-3221, the Division must assume groundwater to be present at shallow depths throughout the area defined in said order unless the applicant specifically documents otherwise. The absence of wells does not necessarily indicate lack of groundwater, since wells are drilled only when a water supply is needed. Likewise, the lack of a sufficient water supply to provide for commercial or industrial use does not mean that a supply sufficient to provide domestic or stock water does not exist. Also, the lack of groundwater at a site does not mean that the surface discharge could not impair other groundwater, since the discharged water could move downdip in the subsurface so as to commingle in the reasonably foreseeable future with an uncontaminated water supply and impair its use. The applicant must show that discharge in an area containing no groundwater will not cause impairment in an adjacent area with groundwater.

(2) The Division must assume that any groundwater present that could be affected by surface disposal has 10,000 mg/l or less of total dissolved solids unless otherwise documented by the applicant. This includes shallow groundwater at the site, or groundwater that could be impaired by movement of contaminated groundwater.

(3) The Division must further assume, unless the applicant demonstrates otherwise, that present or reasonably foreseeable beneficial use of water that has 10,000 mg/l or less of total dissolved solids would be impaired by contamination due to surface disposal of produced water. An applicant has several options to attempt to demonstrate lack of beneficial use:

(a) If water is of very poor quality nearing 10,000 mg/l , the applicant can present current water use, future projected use, availability of alternative supplies, etc., in an attempt to demonstrate that there is no reasonable relationship between the economic and social costs of failure to grant the exception and benefits to be gained from continuing to protect the water for domestic or agricultural use now or in the future. The water would be considered or judged to be already so conta-

minated that it would be economically or technologically impractical to treat the water for use at present or in the reasonably foreseeable future using treatment methods reasonably employed in public water supply systems. Methods in common use include aeration, air stripping, carbon adsorption, chemical precipitation, chlorination, flotation, fluoridation and granular filtration. Methods known to be used under special circumstances include desalination, ion exchange, and ozonation.

(b) The applicant can attempt to demonstrate for water currently contaminated, either by natural processes or human activity such that it cannot be beneficially used now or in the future, that the further addition of types and volumes of contaminants will not cause impairment of uncontaminated waters, beyond what would occur through natural movement.

(c) The applicant can attempt to demonstrate that the groundwater present is not of sufficient volume to provide a reliable water supply for beneficial use, including domestic or stock use. This could occur if the shallow water was located in a discontinuous stratigraphic zone or lens of limited aereal extent.

The above options are only examples; other alternatives can be considered as long as water that has future beneficial use is protected.