

Entered May 20, 1981
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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7226
Order No. R-6685

APPLICATION OF ENSERCH EXPLORATION,
INC. FOR SALT WATER DISPOSAL,
ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on April 22, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of May, 1981, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Enserch Exploration, Inc., is the owner and operator of the Rader Well No. 2, located in Unit E of Section 32, Township 5 South, Range 33 East, NMPM, South Peterson Field, Roosevelt County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Montoya formation, with injection into the perforated interval from approximately 7902 feet to 7930 feet.

(4) That said Montoya formation immediately underlies the Fusselman formation, and Phillips Petroleum Company, which operates a well producing from the Fusselman formation at a location some 1731 feet Northwest of said Rader Well No. 2, appeared at the hearing and objected to applicant's proposed disposal of water into said Fusselman formation.

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(5) That the basis for the Phillips objection is the alleged possibility of disposal water breaking out of the Montoya formation and migrating into the Fusselman producing zone, thereby posing a threat to the oil production from the aforesaid Phillips producing well, its Lambirth "A" Well No. 4.

(6) That the Enserch interpretation of the logs of said Lambirth "A" Well No. 4 below the productive interval of 7814 feet to 7828 feet indicates the presence of two zones of only slight permeability, the first being at a depth from 7840 feet to 7850 feet and the second being at a depth of 7924 feet to 7934 feet.

(7) That while Enserch alleges that these "tight" zones would provide vertical separation between the Phillips producing interval and the Enserch disposal zone, Phillips contends that there is no physical separation between the base of its producing interval in the Fusselman formation and the top of the Enserch disposal interval in the Montoya formation, inasmuch as there are vertical fractures in the Fusselman through which water injected into the upper Montoya could migrate to the upper Fusselman and endanger its producing well, the Lambirth "A" Well No. 4.

(8) That there is evidence of vertical fracturing in the Fusselman formation in this area.

(9) That while the extent of said fracturing is not known, the vertical fractures may well extend through the "tight" zones Enserch relies upon to keep the disposal zone and the productive zone separated.

(10) That should said fractures extend through the "tight" zones, said zone's efficacy as an efficient barrier would be diminished and the Phillips production could be subject to water invasion.

(11) That such water invasion could result in premature abandonment by the Phillips production, thereby causing loss of otherwise recoverable hydrocarbons and waste of oil and gas, as well as impairment of correlative rights.

(12) That there is no means presently available whereby the migration of injected water could be monitored and a determination made of imminent water invasion in the Phillips well prior to its actual occurrence, at which time it could be too late to prevent loss of hydrocarbons.

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(13) That Enserch has not investigated all other possible means of water disposal in the subject area.

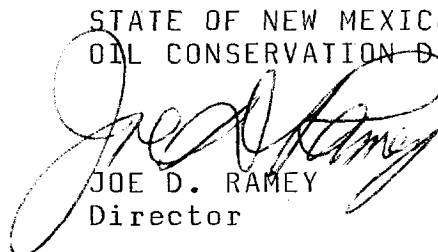
(14) That the application should be denied.

IT IS THEREFORE ORDERED:

(1) That the application of Enserch Exploration, Inc., for salt water disposal into the Montoya formation in the perforated interval from 7902 feet to 7930 feet in its Rader Well No. 2, located in Unit E of Section 32, Township 5 South, Range 33 East, NMPM, South Peterson Field, Roosevelt County, New Mexico, is hereby denied.

(2) That 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

JOE D. RAMEY
Director

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