



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION
UPON ITS OWN MOTION TO CONSIDER AN ORDER PROHIBITING THE DISPOSAL OF OIL
FIELD BRINES IN SURFACE PITS IN LEA, CHAVES, ROOSEVELT, AND EDDY COUNTIES,
NEW MEXICO.

CASE No. 3551
Order No. R-3221

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 19, 1967, at Hobbs, New Mexico, before the Oil
Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 1st day of May, 1967, the Commission, a quorum being present, having considered the
testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this
cause and the subject matter thereof.
- (2) That large amounts of water produced in conjunction with the production of oil or gas, or both, are
being disposed of on the surface of the ground by means of unlined disposal pits located in Lea, Eddy,
Chaves, and Roosevelt Counties, New Mexico.
- (3) That said produced water contains high concentrations of chlorides.
- (4) 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) 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
watercourse, constitutes a hazard to existing fresh water supplies, as designated by the state engineer, in
the vicinity of such disposal.
- (6) That in order to afford reasonable protection against contamination of fresh water supplies as
designated by the state engineer, 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 watercourse, or in any other place or in any manner which will constitute a hazard to
any fresh water supplies existing in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, should
be prohibited in said Counties.
- (7) That the testimony indicates that the volume of water produced in conjunction with the production of
oil or gas, or both, from the North Bagley-Upper Pennsylvanian, North Bagley Middle Pennsylvanian,
North Bagley-Lower Pennsylvanian, North Bagley-Wolfcamp, and Northeast Bagley-Wolfcamp Pools,

Lea County, New Mexico, and being disposed of into unlined pits is so great as to constitute an imminent threat to fresh water supplies designated by the state engineer and the surface disposal of said water should, therefore, be prohibited after October 31, 1967, in the area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(8) That large amounts of water are produced in conjunction with the production of oil from active waterflood projects and active water pressure maintenance projects.

(9) That one or more injection wells are present in each waterflood project.

(10) That in order to afford reasonable protection against contamination of fresh water supplies designated by the state engineer, the surface disposal of water produced in conjunction with the production of oil from active waterflood projects and active water pressure maintenance projects should be prohibited after December 31, 1967, in the area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(11) That complete prohibition of surface disposal in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, of water produced in conjunction with the production of oil or gas, or both, should be accomplished by December 31, 1968, unless specifically exempted.

(12) That the surface disposal in pits of not more than one barrel per day for each developed 40-acre tract served by said pits, but limited to a maximum of 16 barrels per day, is so insignificant as to present little hazard to fresh water supplies and should be allowed in order to prevent waste caused by the premature abandonment of wells.

(13) That in order to prevent waste caused by the drowning out of oil or gas wells or burdensome delay or expenses, the District Supervisor of the appropriate District Office of the Commission should be empowered to authorize temporary disposal in surface pits for a period not to exceed 30 days for such contingencies as injection system failures and evaluation of wildcat wells.

IT IS THEREFORE ORDERED:

(1) That effective November 1, 1967, the disposal of water produced in conjunction with the production of oil or gas, or both, from the North Bagley-Upper Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley Wolfcamp, and Northeast Bagley-Wolfcamp Pools, Lea County, New Mexico, or within one mile thereof, 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 any fresh water supplies, is hereby prohibited in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(2) That effective January 1, 1968, the disposal of water produced in conjunction with the production of oil from any waterflood project or water pressure maintenance project 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 any fresh water supplies is hereby prohibited in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(3) That effective January 1, 1969, 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 watercourse, or in any other place or in any manner which will constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited by Orders Nos. (1) or (2) above, or by Order No. R-1224-A, or by Order No. R-2526, or by Order No. R-2788, or by Order No.

R-3164, is hereby prohibited in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(4) That in those areas subject to the provisions of Orders Nos. (1) and (3) above, surface pits may be utilized for the disposal of a maximum of one barrel of produced water per day for each developed 40-acre tract served by said pits, provided however, that in no event shall said surface pit disposal exceed 16 barrels per day, and provided further, that this authorization shall not apply to those areas affected by Orders Nos. R-1224-A, R-2526, R-2788, or R-3164.

(5) That nothing contained in this order shall be construed as prohibiting the disposal of water produced in conjunction with the production of oil or gas, or both, in impervious lined pits presently in use, provided said pits were inspected and approved by a Commission representative prior to use, and for so long as said pits are properly maintained to ensure their continued imperviousness.

(6) That each unlined pit used for the disposal of water produced in conjunction with the production of oil or gas, or both, and not servicing a well exempt under the provisions of Order No. (4) above shall be filled, leveled, and compacted within six months after its use for the disposal of produced water is prohibited or by November 1, 1967, whichever date is later.

(7) That nothing contained in this order shall be construed as prohibiting the use and maintenance of mud pits or burn pits.

(8) That the District Supervisor of the appropriate District Office of the Commission is hereby empowered to authorize temporary disposal in surface pits for a period not to exceed 30 days for such contingencies as injection system failures and evaluation of wildcat wells. Authority for said disposal shall only be granted on an individual case basis and only after the volume and quality of the water produced and the proximity of fresh water supplies have been taken into consideration.

(9) That the provisions of this order are in addition to the provisions of Order No. R-1224-A, Order No. R-2526, Order No. R-2788, and Order No. R-3164 of the Commission and nothing herein contained shall be construed as abridging or altering in any manner the provisions of said orders.

(10) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO

OIL CONSERVATION DIVISION

Signed by
DAVID F. CARGO, Chairman

Signed by

GUYTON B. HAYS, Member

Signed by
A. L. PORTER, Jr., Member & Secretary

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION UPON ITS OWN MOTION TO CONSIDER THE REVISION OF PARAGRAPH (1) OF ORDER NO. R-3221, TO PROVIDE THAT THE EFFECTIVE DATE FOR THE PROHIBITION OF SURFACE DISPOSAL OF PRODUCED WATER FROM THE NORTH BAGLEY-UPPER PENNSYLVANIAN, NORTH BAGLEY-MIDDLE PENNSYLVANIAN, NORTH BAGLEY-LOWER PENNSYLVANIAN, NORTH BAGLEY-WOLFCAMP, AND NORTHEAST BAGLEY-WOLFCAMP POOLS, LEA COUNTY, NEW MEXICO, OR WITHIN ONE MILE THEREOF, BE CHANGED FROM NOVEMBER 1, 1967, TO SOME EARLIER DATE.

CASE No. 3644
Order No. R-3221-A

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 30, 1967, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 31st day of August, 1967, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That effective November 1, 1967, Order (1) of Order No. R-3221 forbids the disposal of water produced in conjunction with the production of oil or gas, or both, from the North Bagley Upper Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley-Wolfcamp, and Northeast Bagley-Wolfcamp Pools, Lea County, New Mexico, or within one mile thereof, 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 any fresh water supplies in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.
- (3) That upon considering the evidence presented in Case No. 3551 which resulted in the issuance of Order No. R-3221, the Commission found the production of salt water in the North Bagley Field to be so great as to constitute an imminent threat to the fresh water supplies designated by the state engineer and found that it would be necessary to prohibit surface disposal of said salt water no later than November 1, 1967, in order to afford reasonable protection against contamination of said fresh water supplies.
- (4) That the evidence presented in Case No. 3644 establishes that the volume of salt water being produced in conjunction with the production of oil or gas, or both, in the North Bagley Field greatly exceeds the volume of produced salt water anticipated by the Commission when it issued Order No. R-3221.

(5) That the evidence presented in Case No. 3644 establishes that the excessive amounts of water being produced in conjunction with the production of oil or gas, or both, in the North Bagley Field constitute an even more immediate threat to the fresh water supplies than anticipated by the Commission at the time Order No. R-3221 was issued.

(6) That the testimony presented in Case No. 3644 indicates that all salt water disposal systems in the North Bagley Area heretofore authorized by the Commission can be in operation by approximately the middle of October, 1967.

(7) That the aforesaid salt water disposal systems will be capable of handling all salt water being produced in the North Bagley Field in mid-October.

(8) That the prohibition of water produced in conjunction with the production of oil or gas, or both, in the North Bagley Field, or within one mile thereof, 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 any fresh water supplies on or after November 1, 1967, in the area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, will not afford reasonable protection against contamination of fresh water supplies designated by the state engineer.

(9) That in order to afford reasonable protection against contamination of fresh water supplies designated by the state engineer, Order (1) of Order No. R-3221 should be amended to prohibit the surface disposal of water produced in conjunction with the production of oil or gas, or both, in the North Bagley Field, or within one mile thereof, on or after October 16, 1967.

IT IS THEREFORE ORDERED:

(1) That Order (1) of Order No. R-3221, dated May 1, 1967, is hereby amended to read in its entirety as follows:

"(1) That effective October 16, 1967, the disposal of water produced in conjunction with the production of oil or gas, or both, from the North Bagley-Upper Pennsylvanian, North Bagley-Middle Pennsylvanian, North Bagley-Lower Pennsylvanian, North Bagley Wolfcamp, and Northeast Bagley-Wolfcamp Pools, Lea County, New Mexico, or within one mile thereof, 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 any fresh water supplies, is hereby prohibited in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico."

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Signed by

DAVID F. CARGO, Chairman

Signed by

GUYTON B. HAYS, Member

Signed by

A. L. PORTER, Jr., Member & Secretary

SEAL

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BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION
ON ITS OWN MOTION TO CONSIDER THE AMENDMENT OF ORDER No. R-3221, THE
COMMISSION'S SALT WATER DISPOSAL ORDER, TO PERMIT THE EXEMPTION OF
CERTAIN PRESENTLY EXISTING AND FUTURE POOLS IN EDDY AND LEAD COUNTIES,
NEW MEXICO, FROM CERTAIN REQUIREMENTS OF SAID ORDER.

CASE No. 3806
Order No. R-3221-B

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on July 17, 1968, at Santa Fe, New Mexico, before the Oil
Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 25th day of July, 1968, the Commission, a quorum being present, having considered the
testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this
cause and the subject matter thereof.
- (2) That effective January 1, 1969, Order (3) of Commission Order No. R-3221, dated May 1, 1967,
prohibits in that area encompassed by Lead, Eddy, Chaves, and Roosevelt Counties, New Mexico, the
disposal, subject to minor exceptions, 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 watercourse, or in any other place or in any manner which will constitute a hazard to any fresh
water supplies and said disposal has not previously been prohibited.
- (3) That within the area described as:

EDDY AND LEA COUNTIES, NEW MEXICO

TOWNSHIP 19 SOUTH, RANGE 30 EAST, NMPM
Sections 8 through 36
TOWNSHIP 20 SOUTH, RANGE 30 EAST, NMPM
Sections 1 through 36
TOWNSHIP 20 SOUTH, RANGE 31 EAST, NMPM
Sections 1 through 36
TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM
Sections 4 through 9;
Sections 16 through 21;
and Sections 28 through 33
TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM
Sections 1 through 36

TOWNSHIP 21 SOUTH, RANGE 30 EAST, NMPM
Sections 1 through 36
TOWNSHIP 21 SOUTH, RANGE 31 EAST, NMPM
Sections 1 through 36
TOWNSHIP 22 SOUTH, RANGE 29 EAST, NMPM
Sections 1 through 36
TOWNSHIP 22 SOUTH, RANGE 30 EAST, NMPM
Sections 1 through 36
TOWNSHIP 23 SOUTH, RANGE 29 EAST, NMPM
Sections 1 through 3;
Sections 10 through 15;
Sections 22 through 27;
and Sections 34 through 36
TOWNSHIP 23 SOUTH, RANGE 30 EAST, NMPM
Sections 1 through 19

exist a number of oil and gas pools which produce varying amounts of salt water.

(4) That the major portions of Clayton Basin and North Draw, broad depressions caused by the slumping of the surface due to the removal of the underlying salt by solution, lie within the above described area.

(5) That the general direction of movement of both ground water and surface water in the subject area is toward and into said basins, thence southwest in Nash Draw toward Malaga Bend.

(6) That a substantial amount of water is produced in conjunction with the production of oil or gas, or both, by the oil and gas wells located in the above-described area.

(7) That said produced water is presently being disposed of in surface pits located in the above-described area.

(8) That a number of large surface ponds, or lakes, containing extremely high concentrations of chlorides are located in the above-described area.

(9) That in relation to said surface lakes, said disposal pits are inconsiderable in volume of water received and seepage underground.

(10) That the aforesaid disposal pits and surface lakes are located within the same surface and subsurface drainage system, as described in Finding (5) above.

(11) That the purpose of Order No. R-3221, to afford reasonable protection against contamination of fresh water supplies by surface disposal of produced water, would not be advanced by the enforcement of said order as to the above-described area.

IT IS THEREFORE ORDERED:

(1) That all oil and gas wells, both existing and prospective, located in the following-described area are hereby excepted from the provision of Order (3) of Order No. R-3221, to authorize the operators of said wells to dispose of water produced in conjunction with the production of oil or gas, or both, from said wells in unlined surface pits located in said following-described area until further order of the Commission:

EDDY AND LEA COUNTIES, NEW MEXICO

TOWNSHIP 19 SOUTH, RANGE 30 EAST, NMPM
 Sections 8 through 3
 TOWNSHIP 20 SOUTH, RANGE 30 EAST, NMPM
 Sections 1 through 36
 TOWNSHIP 20 SOUTH, RANGE 31 EAST, NMPM
 Sections 1 through 36
 TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM
 Sections 4 through 9;
 Sections 16 through 21;
 and Sections 28 through 33
 TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM
 Sections 1 through 36
 TOWNSHIP 21 SOUTH, RANGE 30 EAST, NMPM
 Sections 1 through 36
 TOWNSHIP 21 SOUTH, RANGE 31 EAST, NMPM
 Sections 1 through 36
 TOWNSHIP 22 SOUTH, RANGE 29 EAST, NMPM
 Sections 1 through 36
 TOWNSHIP 22 SOUTH, RANGE 30 EAST, NMPM
 Sections 1 through 36
 TOWNSHIP 23 SOUTH, RANGE 29 EAST, NMPM
 Sections 1 through 3;
 Sections 10 through 15;
 Sections 22 through 27;
 and Sections 34 through 36
 TOWNSHIP 23 SOUTH, RANGE 30 EAST, NMPM
 Sections 1 through 19

(2) That the Commission may by administrative order rescind such authority as to any or all such wells whenever it reasonably appears to the Commission that such rescission would serve to afford reasonable protection against contamination of fresh water supplies.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO

OIL CONSERVATION COMMISSION

Signed by

DAVID F. CARGO, Chairman

Signed by

Guyton B. Hayes, Member

Signed by

A. L. PORTER, Jr., Member & Secretary

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BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION
ON ITS OWN MOTION TO CONSIDER THE AMENDMENT OF ORDER No. R-3221, THE
COMMISSION'S SALT WATER DISPOSAL ORDER, TO PERMIT THE EXEMPTION OF
CERTAIN PRESENTLY EXISTING AND FUTURE POOLS IN EDDY AND LEA COUNTIES,
NEW MEXICO, FROM CERTAIN REQUIREMENTS OF SAID ORDER.

CASE No. 3806
Order No. R-3221-B-1

NUNC PRO TUNC ORDER

BY THE COMMISSION:

It appearing to the Commission that due to clerical error, Order No. R-3221-B, dated July 25, 1968, does not correctly state the intended finding of the Commission in one particular,

IT IS THEREFORE ORDERED:

- (1) That the phrase "North Draw" is hereby stricken from the first line of Finding (4) on Page 2 of Order No. R-3221-B, dated July 25, 1968, and the phrase "Nash Draw" is hereby substituted in lieu thereof.
- (2) That this order shall be effective nunc pro tune as of July 25, 1968.

DONE at Santa Fe, New Mexico, on this 13th day of August, 1968.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Signed by
DAVID CARGO, Chairman

Signed by
Guyton B. Hayes, Member

Signed by
A. L. Porter, Jr., Member and Secretary

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BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION
ON ITS OWN MOTION TO CONSIDER THE AMENDMENT OF ORDER NO. R-3221-B, THE
COMMISSION'S SALT WATER DISPOSAL ORDER.

CASE No. 3807
Order No. R-3221-C

ORDER OF THE COMMISSION
BY THE COMMISSION

This cause came on for hearing at 9 a.m. on July 17, 1968, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 10th day of September, 1968, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That effective upon various dates, Orders (1), (2), and (3) of Commission Order No. R-3221, dated May 1, 1967, prohibits, in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, 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 watercourse, or in any other place or in any manner which will constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.
- (3) That Order (4) of said Order No. R-3221 authorizes limited utilization of unlined surface pits in areas not affected by Orders Nos. R-1224-A, R-2526, R-2788, or R-3164.
- (4) That Order (5) of said Order No. R-3221 authorizes utilization of certain impervious lined pits in use at the effective date of said order.
- (5) That Order (8) of said Order No. R-3221 authorizes temporary disposal in surface pits during certain contingencies.
- (6) That in order to provide more uniform provisions among the various salt water disposal orders of the Commission and to ease the administration of said orders, Order (4) of said Order No. R-3221 should be amended to also authorize, in those areas subject to Orders Nos. (1) and (3) of said Order No. R-3221, the utilization of unlined surface pits in those areas affected by Orders Nos. R-1224-A, R-2526, and R-3164 for the disposal of limited quantities of water.
- (7) That the utilization of lined evaporation pits is feasible and in the interest of good conservation practices, provided they are properly designed, constructed, and maintained.
- (8) That the utilization of properly designed, constructed, and maintained lined evaporation pits should

be authorized in all areas subject to Order No. R-3221.

(9) That in order to prevent waste caused by burdensome delay or expenses upon operators of development wells, Order (B) of said Order No. R-3221 should be amended to also authorize temporary storage or disposal of water in surface pits during the evaluation of all newly completed wells.

IT IS THEREFORE ORDERED:

(1) That Order (4) of Order No. R-3221 is hereby amended to read in its entirety as follows:

"(4) That in those areas subject to the provisions of Orders Nos. (1) and (3) above, and in those areas affected by Orders Nos. R-1224-A, R-2526, and R-3164, surface pits may be utilized for the disposal of a maximum of one barrel of produced water per day for each developed 40-acre tract served by said pits, provided however, that in no event shall said surface pit disposal exceed 16 barrels per day, and provided further, that this authorization shall not apply to that area affected by Order No. R-2788."

(2) That Order (5) of Order No. R-3221 is hereby amended to read in its entirety as follows:

"(5) The use of lined evaporation pits in those areas affected by Orders Nos. (1), (2), and (3) above, and in those areas affected by Orders Nos. R-1224-A, R-2526, R-2788, and R-3164 is hereby prohibited except as follows:

"A. Continued disposal of water in impervious lined pits which were previously constructed pursuant to the provisions of Orders Nos. R-1224-A, R-2526, R-2788, and R-3164, and which were inspected and approved by a Commission representative prior to use, shall be permitted after October 10, 1968, only if the operator of any such lined pit shall have obtained a permit for such use from the appropriate district office of the Commission. The permit shall be applied for in accordance with the provisions of paragraph B-8 below and shall be valid only for so long as the pit is properly maintained to ensure its continued imperviousness.

"B. Under certain circumstances, the District Supervisor of the appropriate district office of the Commission may issue a permit authorizing the use of newly constructed lined pits for evaporation or storage of produced water.

To qualify for and to sustain a permit authorizing the operator to utilize newly constructed lined evaporation pits:

1. The lease or leases served by the installation should have a settled or decreasing rate of water production.
2. The installation must provide adequate storage capacity to safely contain all water produced, taking into account those months during which evaporation rates are normally at their minimum and must provide at least 600 square feet of evaporative surface for each barrel (42 U.S. Gallons) of produced water to be placed in said pit on a daily average basis throughout the year.
3. The installation must provide a header pit, or other appropriate scheme, lined with a suitable oil-resistant material to trap any oil carried with the water, constructed and operated in a manner to prevent said oil from reaching the evaporation pit, and the surface of the evaporation pit must be maintained free of oil.
4. Evaporation and header pits must be constructed with underlying gravel-filled sumps and laterals, or

other suitable devices, for the detection of leakage; the Commission shall be given an opportunity to inspect same prior to being lined with an impervious material, at least 30 mils in thickness, which is resistant to hydrocarbons, salts, and aqueous acids and alkalis. The material must also be fungus- and rot-resistant and must be sun-resistant, or provision made to protect it from the sun.

5. Each lined pit installation shall be identified by a sign, posted on or near said installation which shall show the name of the lease, name of the operator, the location by quarter-quarter section, township and range, and the permit number of the permit authorizing the installation. In addition, the installation must be adequately fenced, with the corners securely braced, and the fence maintained in good repair.

6. Whenever there is evidence that leakage is occurring, the pit or pits must be emptied and repaired to the satisfaction of the Commission before disposal therein may be resumed.

7. Any salt remaining in a lined pit must, upon termination of use of said pit for disposal purposes, be disposed of in a manner that will afford reasonable protection against contamination of fresh water supplies, and the pit shall be filled, leveled, and compacted as soon as practicable after termination of such use.

8. Application for a permit to utilize a lined evaporation pit shall be in triplicate on a form prescribed by the Commission (a copy of which is attached hereto and made a part hereof as Exhibit "A") and shall be filed with an approval obtained from the District Supervisor of the appropriate district office of the Commission prior to commencement of construction. Application forms and minimum specifications for the design and construction of lined evaporation pits are available at the district and Santa Fe offices of the Commission.

"C. The Commission may from time to time make such tests and require the furnishing of such evidence as it deems necessary to determine that any lined evaporation pit is maintained in satisfactory condition. The Commission may suspend or revoke by administrative order the permit authorizing a lined evaporation pit whenever it reasonably appears to the Commission that such suspension or revocation would serve to protect fresh water supplies from pollution."

(3) That Order (8) of Order No. R-3221 is hereby amended to read in its entirety as follows:

"(8) That the District Supervisor of the appropriate district office of the Commission is hereby empowered to authorize temporary storage or disposal in surface pits for a period not to exceed 30 days during such contingencies as injection system failures and evaluation of newly completed wells. Authority for said disposal shall only be granted on an individual case basis and only after the volume and quality of the water produced and the proximity of fresh water supplies have been taken into consideration. Any unlined pit used for temporary storage during an emergency must be emptied as soon as the emergency is ended."

(4) That Order (9) of Order No. R-3221 is hereby amended to read in its entirety as follows:

"(9) That subject to the provisions of Orders Nos. (4) and (5) above, the provisions of this order are in addition to the provisions of Orders Nos. R-1224-A, R-2526, R-2788, and R-3164 of the Commission and nothing herein contained shall be construed as abridging or altering in any manner the provisions of said orders."

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein above designated.

STATE OF NEW MEXICO

OIL CONSERVATION DIVISION

Signed by

DAVID F. CARGO, Chairman

Signed by

GUYTON B. HAYS, Member

Signed by

A. L. PORTER, Jr., Member & Secretary

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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

Signed by
WILLIAM J. LEMAY, Director

S E A L

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 (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/1 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 down dip 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 contaminated 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 areal extent.

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