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. 9497
ORDER NO. R-8916

APPLICATION OF CORINNE B. GRACE
FOR SALT WATER DISPOSAL, EDDY
COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 26, 1988, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 28th day of December, 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) The applicant, Corinne B. Grace, is the owner and operator of the Zac Federal Well No. 1, located 660 feet from the South line and 1980 feet from the West line (Unit N) of Section 25, Township 26 South, Range 30 East, NMPM, Eddy County, New Mexico.

(3) The applicant proposes to utilize said well to dispose of produced salt water into the Bell Canyon and Upper Cherry Canyon formations of the East Ross Draw-Delaware Pool, with injection into the following perforated intervals:

(a) 3886 feet to 3892 feet
(b) 3904 feet to 3928 feet
(c) 4026 feet to 4040 feet
(d) 4084 feet to 4110 feet
(e) 4140 feet to 4150 feet
(f) 4158 feet to 4168 feet
(g) 4320 feet to 4340 feet

(h) 4354 feet to 4376 feet
(i) 4424 feet to 4444 feet
(j) 4474 feet to 4518 feet
(k) 4586 feet to 4624 feet
(l) 4650 feet to 4666 feet
(m) 4715 feet to 4746 feet
(n) 4770 feet to 4786 feet
(o) 4873 feet to 4990 feet.

(4) Ralph Williamson and J.C. Williamson, offset operators to the west of the subject well and mineral interest owners in the area, appeared at the hearing and objected to the injection of produced water into the disposal intervals from 3886 feet to 4586 feet.

(5) Pursuant to the evidence and the testimony presented by the Williamsons, the following four sand intervals which are present between 3886 feet and 4586 feet could possibly be productive of hydrocarbons:

1. 3970 feet to 4063 feet
2. 4122 feet to 4183 feet
3. 4347 feet to 4400 feet
4. 4473 feet to 4518 feet.

(6) There are five sets of proposed perforations which are also located in the above-described sand intervals and are further identified in Finding Paragraph No. (4) above as intervals (c), (e), (f), (h) and (j).

(7) Data presently available is insufficient to adequately show what effect, if any, injected waters would have on hydrocarbon production within the aforementioned sand intervals.

(8) Until such time as conclusive data becomes available on the potential production of the four sand intervals as described in Finding Paragraph No. (5) above, disposal into said intervals (c), (e), (f), (h) and (j) should be denied.

(9) The remaining injection intervals were not contested and the evidence presented at the hearing by the applicant indicates that approval to dispose of produced salt water into the remaining injection intervals in the subject wellbore is in the best interest of conservation, will prevent waste and protect correlative rights.

(10) Injection of produced water into the following perforated intervals in the wellbore of the subject well should be accomplished through 2 7/8-inch plastic-lined tubing installed in a packer set at approximately 3800 feet; the casing-tubing annulus should be filled with an inert fluid; and a pressure gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer:

3886 feet to 3892 feet
3904 feet to 3928 feet
4084 feet to 4110 feet
4320 feet to 4340 feet
4424 feet to 4444 feet
4586 feet to 4624 feet
4650 feet to 4666 feet
4715 feet to 4746 feet
4770 feet to 4786 feet
4873 feet to 4990 feet.

(11) Prior to commencing injection operations, the casing in the subject 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 well or system should be equipped with a pressure-limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 777 psi.

(13) The Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from each of the proposed individual intervals.

(14) The operator should notify the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(15) The operator should 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.

IT IS THEREFORE ORDERED THAT:

(1) The portion of the application of Corinne B. Grace to dispose of produced salt water into the East Ross Draw-Delaware Pool through the following perforated intervals in its Zac Federal Well No. 1, located 660 feet from the South line and 1980 feet from the West line (Unit N) of Section 25, Township 26 South, Range 30 East, NMPM, Eddy County, New Mexico is hereby denied.

4026 feet to 4040 feet
4140 feet to 4150 feet
4158 feet to 4168 feet
4354 feet to 4376 feet
4474 feet to 4518 feet.

(2) The remainder of the subject application is hereby approved and Corinne B. Grace is authorized to dispose of produced salt water into the following perforated intervals in said wellbore, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 3800 feet:

3836 feet to 3892 feet
3904 feet to 3928 feet
4084 feet to 4110 feet
4320 feet to 4340 feet
4424 feet to 4444 feet
4586 feet to 4624 feet
4650 feet to 4666 feet
4715 feet to 4746 feet
4770 feet to 4786 feet
4873 feet to 4990 feet.

PROVIDED HOWEVER THAT, the tubing shall be internally plastic-lined; the casing-tubing annulus shall be filled with an inert fluid; and a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak-detection device in order to determine leakage in the casing, tubing or packer.

PROVIDED FURTHER THAT, prior to commencing injection operations, the casing in the subject well shall be pressure-tested to assure the integrity of such casing in a manner that is satisfactory to the supervisor of the Division's district office at Artesia.

(3) The injection well or system shall be equipped with a pressure-limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than [illegible] psi.

(4) The Director of the Division may authorize an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from each of the proposed individual intervals.

(5) The operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(6) The operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing, casing or packer in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(7) The applicant shall conduct disposal operations and submit monthly reports in accordance with Rules 702, 703, 704, 705, 706, 708 and 1120 of the Division Rules and Regulations.

(8) 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

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