

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. 9287
Order No. R-8607

APPLICATION OF PENROC OIL CORPOR-
ATION FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on January 20, 1988, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 8th day of March, 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, Penroc Oil Corporation, is the owner and operator of the George McGonagill Well No. 1 located 330 feet from the North line and 990 feet from the East line (Unit A) of Section 2, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) The applicant proposes to utilize said well to commercially dispose of produced salt water into the San Andres formation with injection into the perforated interval from approximately 4790 feet to 5086 feet.

(4) The injection should be accomplished through 2 7/8-inch plastic-lined tubing installed in a packer set at approximately 4600 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.

(5) The evidence presented in this case indicates that the Cities Service State "BJ" Well No. 1 located 2310 feet from the South line and 990 feet from the East line (Unit I) of Section 35, Township 17 South, Range 35 East, NMPM, which is currently an active Abo producing well and which is located within one-half mile of the proposed disposal well, is not cemented across and above the San Andres formation.

(6) The evidence in this case further indicates that there are at least five San Andres disposal wells located in close proximity to the Cities Service State "BJ" Well No. 1, which have injected to date substantial volumes of salt water into the San Andres formation.

(7) Division records indicate that said State "BJ" Well No. 1, which is bradenhead tested annually by the Division, has not and is currently not serving as a conduit for upward migration of salt water from the San Andres formation through the uncemented 5 1/2-inch casing annulus.

(8) Inasmuch as the State "BJ" Well No. 1 is constructed in a manner which will protect overlying fresh water aquifers, the applicant should not be required to perform remedial cement operations on said well prior to initiating injection operations into the George McGonagill Well No. 1; however, the applicant should be required to perform said remedial cement operations on the State "BJ" Well No. 1 if, in the future, it becomes apparent that said wellbore is serving as a conduit for upward migration of salt water from the San Andres formation.

(9) At the time of the hearing, Rice Engineering Corporation, an operator who currently operates three commercial salt water disposal wells within one mile of the proposed disposal well, requested by letter that the Division limit the proposed disposal well to injection by vacuum only.

(10) The applicant testified that he anticipates the proposed disposal well will take water on vacuum but requested that he be allowed to inject at a pressure equal to 0.2 psi per foot of depth to the uppermost perforation (958 psi) should circumstances warrant.

-3-

CASE 9287

Order No. R-8607

(11) Rice Engineering Corporation presented no evidence which would indicate that pressurized injection in the proposed disposal well would have a detrimental effect on their current operations in the area and, therefore, the applicant's request for pressurized injection should be granted.

(12) 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.

(13) 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 958 psi.

(14) 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 the San Andres formation.

(15) The operator should notify the supervisor of the Hobbs 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.

(16) 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.

(17) Approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Penroc Oil Corporation, is hereby authorized to utilize its George McGonagill Well No. 1 located 330 feet from the North line and 990 feet from the East line (Unit A) of Section 2, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, to dispose of produced

-4-
CASE 9287
Order No. R-8607

salt water into the San Andres formation, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 4600 feet, with injection into the perforated interval from approximately 4790 feet to 5086 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, and/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 Hobbs.

(2) 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 958 psi.

(3) The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the San Andres formation.

(4) The operator shall notify the supervisor of the Hobbs 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.

(5) The operator shall immediately notify the supervisor of the Division's Hobbs 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.

(6) The Director of the Division shall have the authority to require the applicant to suspend injection operations into the well and to perform remedial cement operations on the Cities Service State "BJ" Well No. 1 located 2310 feet from the South line and 990 feet from the

-5-

CASE 9287

Order No. R-8607

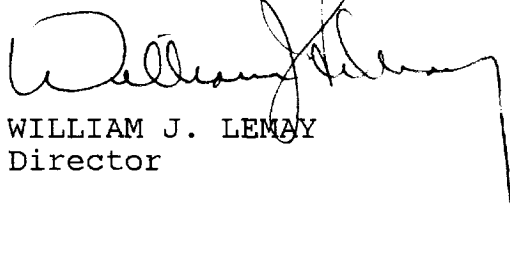
East line (Unit I) of Section 35, Township 17 South, Range 35 East, NMPM, if it becomes apparent that said wellbore is serving as a conduit for upward migration of water from the San Andres formation.

(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

S E A L