

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. 9972  
Order No. R-9240

APPLICATION OF GARY L. BENNETT  
FOR A PRESSURE MAINTENANCE  
PROJECT, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 27, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 31st day of July, 1990, 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, Gary L. Bennett, seeks authority to institute a pressure maintenance project on its Cavalcade Federal "21" Lease comprising the E/2 SW/4 and SE/4 of Section 21, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, by the injection of water into the Querecho Plains-Queen Associated Pool through the perforated interval from approximately 4088 feet to 4130 feet in its Cavalcade Federal "21" Well No. 4 located 400 feet from the South line and 660 feet from the East line (Unit P) of said Section 21.

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(3) The applicant proposes to maintain reservoir pressure in the Querecho Plains-Queen Associated Pool by the injection of water into the Penrose member of the Queen formation within the wellbore of its Cavalcade Federal "21" Well No. 4 as described above.

(4) The proposed pressure maintenance project should result in the recovery of otherwise unrecoverable oil from the Querecho Plains-Queen Associated Pool, thereby preventing waste.

(5) 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.

(6) The evidence presented indicates that within the proposed injection well's area of review, there are two wells which may not be adequately cemented or plugged back in a manner adequate to confine the injected fluid to the proposed injection zone, these being the Cavalcade Federal "21" Well Nos. 1 and 3 located, respectively, 660 feet from the South line and 1650 feet from the East line (Unit O), and 1980 feet from the South line and 660 feet from the East line (Unit I), both in said Section 21.

(7) Prior to commencing injection operations, the applicant should be required to perform remedial cement operations and remedial plug back operations on the wells described in Finding No. (6) above in a manner satisfactory to the supervisor of the Division's Hobbs district office.

(8) In addition, the evidence presented indicates that within the SW/4 SW/4 of Section 22, Township 18 South, Range 32 East, NMPM, there apparently exists a plugged and abandoned well of which the Division has no records, and it is unknown whether such well has been plugged in a manner which will prevent the migration of fluid from the injection formation.

(9) The applicant currently operates an additional Queen producing well, the Federal "Q" Well No. 4 located 660 feet from the South line and 710 feet from the West line (Unit M) of said Section 22 which is located in close proximity to said plugged and abandoned well.

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(10) The applicant should not be required to re-enter and replug said well at this time, provided however, that the applicant should be required, as long as pressure maintenance operations are being conducted, to produce its Federal "Q" Well No. 4 so as to draw down the pressure in the Queen formation.

(11) Injection into the proposed injection well should be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation; the casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(12) The injection well or system should be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 817 psi.

(13) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in migration of waters from the Querecho Plains-Queen Associated Pool.

(14) Prior to commencing injection operations into the proposed injection well, the casing should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(15) The operator should give advance notification to the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure test, and of the conductance of any remedial cement or plug back operations in order that the same may be witnessed.

(16) The project allowable should be equal to top unit allowable for the Querecho Plains-Queen Associated Pool times the number of developed (production or injection) proration units within the project area.

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(17) The project should be designated the Cavalcade Queen Pressure Maintenance Project.

(18) The application should be approved and the project should be governed by the provisions of Rules 701 through 708 of the Oil Conservation Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Gary L. Bennett, is hereby authorized to institute a pressure maintenance project on its Cavalcade Federal "21" Lease comprising the E/2 SW/4 and SE/4 of Section 21, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, by the injection of water into the Querecho Plains-Queen Associated Pool through the perforated interval from approximately 4088 feet to 4130 feet in its Cavalcade Federal "21" Well No. 4 located 400 feet from the South line and 660 feet from the East line (Unit P) of said Section 21.

(2) The project is hereby designated the Cavalcade Queen Pressure Maintenance Project.

(3) The project allowable shall be equal to top unit allowable for the Querecho Plains-Queen Associated Pool times the number of developed (production or injection) proration units within the project area.

(4) Prior to commencing injection operations, the applicant shall be required to perform remedial cement operations and remedial plug back operations on the Cavalcade Federal "21" Well Nos. 1 and 3 located, respectively, 660 feet from the South line and 1650 feet from the East line (Unit O), and 1980 feet from the South line and 660 feet from the East line (Unit I), both in said Section 21, in a manner satisfactory to the supervisor of the Division's Hobbs district office.

(5) The applicant shall further be required, as long as pressure maintenance operations are being conducted, to produce its Federal "Q" Well No. 4, described in Finding No. (9) above, so as to draw down the pressure in the Queen formation.

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(6) The operator shall 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.

(7) Injection into the proposed injection well shall be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation; the casing-tubing annulus shall be filled with an inert fluid and a gauge or approved leak detection device shall be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(8) The injection well or system shall be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 817 psi.

(9) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in migration of waters from the Querecho Plains-Queen Associated Pool.

(10) Prior to commencing injection operations into the injection well, the casing shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(11) The operator shall give advance notification to the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure test, and of the conductance of any remedial cement or plug back operations in order that the same may be witnessed.

(12) The operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing, casing, or packer in the injection well, the leakage of water or oil from or around any producing well, or the leakage of water or oil from or around any plugged and abandoned well within the project area and shall take such steps as may be timely and necessary to correct such failure or leakage.

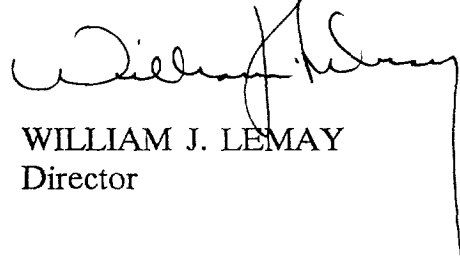
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(13) The applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

(14) 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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