

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. 11003
ORDER NO. R-10314*

**APPLICATION OF HAL J. RASMUSSEN
OPERATING, INC. 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 August 4, 1994 at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 13th day of February, 1995 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 in this matter, Hal J. Rasmussen Operating, Inc. ("Rasmussen"), owns and operates the Farnsworth "A" Federal Lease comprising the E/2 E/2 of Section 13, Township 26 South, Range 36 East, NMPM, and Lots 1 through 4 and the E/2 W/2 (W/2 equivalent) of Section 18, Township 26 South, Range 37 East, NMPM, both in Lea County, New Mexico. There are currently three Scarborough-Yates Seven Rivers Pool producing oil wells within said lease with an average rate of production of approximately 70 barrels of oil per day. There have been a total of twelve wells producing from the Scarborough-Yates Seven Rivers Pool on said lease and cumulative production as of December 31, 1993 from the lease was 2,800,927 barrels of oil. Immediately to the south of this lease in Section 19, Township 26 South, Range 37 East, NMPM, Rasmussen operates the (Continental) Scarborough Eaves (Lease) Pressure Maintenance Project (approved by Division Order No. R-3487-A, dated September 8, 1969, and expanded by Division Order No. R-6277, dated March 11, 1980) and

the (Continental) McCallister "A" Scarborough (Lease) Pressure Maintenance Project (approved by Division Order No. R-4026, dated September 10, 1970) in Section 24, Township 26 South, Range 36 East, NMPM.

(3) At this time the applicant seeks authority to institute a pressure maintenance project on the above-described Farnsworth "A" Federal Lease by the injection of water into the Seven Rivers formation of the Scarborough-Yates Seven Rivers Pool, through the open hole interval from approximately 3150 feet to 3350 feet in its Farnsworth "A" Federal Well No. 1 (API No. 30-025-09854), located 990 feet from the North line and 330 feet from the East line (Unit A), and through the open hole interval from approximately 3230 feet to 3380 feet in its Farnsworth "A" Federal Well No. 2 (API No. 30-025-09855), located 330 feet from the South line and 990 feet from the East line (Unit P), both in said Section 13. Both wells are currently shut-in and both were Scarborough-Yates Seven Rivers oil producing wells within the subject lease.

(4) The proposed pressure maintenance project will essentially serve as an extension to the two existing projects to the south. It is Rasmussen's intent to inject up to 10,000 barrels of water per day. Initially injection will be on a vacuum and should pressure increase within the injection zone the pressure will be maintained within the Division's guideline of 0.2 psi per foot of depth.

(5) Produced water from the Farnsworth "A" Federal and Eaves "A" Leases would be the initial source of injection water into the proposed project.

(6) Pursuant to General Rule 701.E, the proposed project should be classified as a pressure maintenance project and governed accordingly.

(7) The proposed leasewide pressure maintenance project should result in the recovery of otherwise unrecoverable oil thereby preventing waste, exhibits sound engineering practices, is in the best interest of conservation, and will not impair correlative rights.

(8) The area for said project should incorporate the applicant's Farnsworth "A" Federal Lease as described in Finding Paragraph No. (2), above and designated the *"Farnsworth "A" Federal (Lease) Pressure Maintenance Project"*.

(9) The project allowable should be equal to top unit allowable for the Scarborough-Yates Seven Rivers Pool (128 barrels of oil per day) times the number of developed (production or injection) proration units within the project area.

(10) The transfer of allowable between wells within the project area should be permitted.

(11) The applicant submitted data on the proposed injection wells, water wells in the area, and all other wells (including plugged wells) which penetrate the zone of interest within the 1/2-mile "area-of-review" of both of the proposed injection wells. This data shows that wells in the area are cased and plugged so as to protect fresh water and prevent fluid migration from the injection zone, and includes testimony indicating no evidence of open faults or any other hydrologic connection between the injection zone and the fresh water resources in the area.

(12) The operator should take all steps to ensure that the injected water enters only the proposed injection interval and is not permitted to escape into other formations or onto the surface from injection, production or plugged and abandoned wells.

(13) Injection into each well should be accomplished through either 5-inch or 5 1/2-inch plastic-lined or plastic-coated tubing installed in a packer set no higher than 100 feet above the top of the open hole; the casing-tubing annulus in each well 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 leaks in the casing, tubing or packer.

(14) The injection wells or pressurization system for each well should be so equipped as to limit injection pressure at the wellhead to no more than 630 psi, however the Division Director should have authority to increase said pressure limitation, should circumstances warrant.

(15) Prior to commencing injection operations, the casing in each of the subject wells should be pressure tested throughout the interval, from the surface down to the proposed packer-setting depth, to assure integrity of such casing.

(16) The operator should give advance notice to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

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

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Hal J. Rasmussen Operating, Inc. ("Rasmussen"), is hereby authorized to institute a pressure maintenance project on its Farnsworth "A" Federal Lease by the injection of water into the Seven Rivers formation of the Scarborough-Yates Seven Rivers Pool through the existing Farnsworth "A" Federal Well No. 1 (**API No. 30-025-09854**), located 990 feet from the North line and 330 feet from the East line (Unit A) and Farnsworth "A" Federal Well No. 2 (**API No. 30-025-09855**), located 330 feet from the South line and 990 feet

from the East line (Unit P), both in Section 13, Township 26 South, Range 36 East, NMPM, Lea County, New Mexico.

(2) The pressure maintenance project, hereby designated the "*Farnsworth "A" Federal (Lease) Pressure Maintenance Project*", shall be comprised of the following described area in Lea County, New Mexico:

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NMPM
Section 13: E/2 E/2

TOWNSHIP 26 SOUTH, RANGE 37 EAST, NMPM
Section 18: Lots 1 through 4 and E/2 W/2

(3) The allowable for the project area shall be any amount up to and including a volume equal to the top unit allowable for the Scarborough-Yates Seven Rivers Pool (128 barrels of oil per day) times the number of proration units (producing or injection) within the project area.

FURTHER: The allowable assigned to the project area may be produced from any well or wells within the project area in any proportion.

(4) Injection into the Farnsworth "A" Federal Well No. 1 shall be through 5-inch internally plastic lined or coated tubing with injection into the open hole interval from approximately 3150 feet to 3350 feet.

(5) Injection into the Farnsworth "A" Federal Well No. 2 shall be through 5 1/2-inch internally plastic lined or coated tubing with injection into the open hole interval from approximately 3230 feet to 3380 feet.

(6) The tubing string in each well shall be installed in a packer set no higher than 100 feet above the top of the open hole; the casing-tubing annulus in each injection well 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.

(7) Each injection well or pressurization system for each well 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 630 psi.

(8) The Division Director shall have the authority to administratively authorize an increase in the injection pressure limitation placed upon any well upon a proper showing by the

operator that such higher pressure will not result in the migration of the injected waters from the Seven Rivers formation.

(9) Prior to commencing injection operations, the casing in each of the subject wells shall be pressure tested to assure the integrity of such casing in a manner that is satisfactory to the supervisor of the Division's Hobbs District Office.

(10) The operator shall notify the supervisor of the Hobbs District Office of the Division in advance of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(11) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer, in either of said injection wells or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(12) Should it become necessary, the supervisor of the Hobbs District Office of the Division or the Director may at any time order a decrease of the injection pressure on any of the subject injection wells.

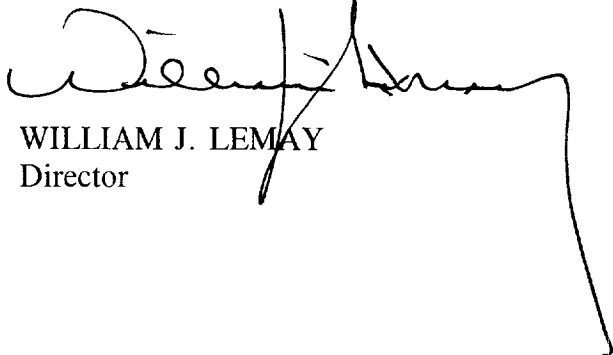
(13) Said pressure maintenance project shall be governed by the applicable provisions of Rules 701 through 708 of the Division Rules and Regulations.

(14) Monthly progress reports shall be submitted to the Division in accordance with Rules 706 and 1115.

(15) 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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