

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. 9810
ORDER NO. R-9075-B

APPLICATION OF YATES DRILLING COMPANY
FOR WATERFLOOD PROJECTS, CHAVES COUNTY,
NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on November 29, 1989 and on December 27, 1989, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 15th day of March, 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) At the time of the hearing, this case was consolidated with Division Case Nos. 9809 and 9823 for the purpose of testimony.
- (3) By Division Order No. R-9075, issued in Case No. 9809 and dated December 14, 1989, the Cactus Queen (Statutory) Unit Agreement was approved for statutory unitization for the purpose of instituting a waterflood project in the Southeast Chaves Queen Gas Area Associated Pool underlying the following described acreage in Chaves County, New Mexico:

TOWNSHIP 12 SOUTH, RANGE 31 EAST, NMPM

Section 26: SW/4 SW/4
Section 27: NE/4 SW/4, S/2 SW/4, and SE/4
Section 34: N/2 NE/4, SE/4 NE/4, and N/2 NW/4
Section 35: NW/4 NW/4

Case No. 9810
 Order No. R-9075-B
 Page No. 2

(4) At the time said Case No. 9809 was heard the required percentage of interest owners within said area had not approved the Unit Agreement; said Order No. R-9075 contained a provision whereby the statutory unitization of the Cactus Queen (Statutory) Unit Agreement would cease to be in effect and would therefore be revoked if the minimum required percentage of interest owners have not signed within a period of six months from the date of said Order (June 14, 1990).

(5) Also, by Division Order No. R-9075-A, issued in Case No. 9823 and dated December 14, 1989, the Cactus Queen Unit (Voluntary) Unit Agreement was recognized by the Division of the voluntary unitization for the purpose of establishing a secondary recovery project in the Southeast Chaves Queen Gas Area Associated Pool underlying the 320 acres of state and federal lands comprising the NE/4 SW/4, S/2 SW/4, and W/2 SE/4 of Section 27 and the NW/4 NE/4 and N/2 NW/4 of Section 34, both in Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico.

(6) Said Order No. R-9075-A also contained a provision whereby it would be rescinded if the terms of Division Order No. R-9075 were met within the prescribed 6-month period.

(7) The applicant in the immediate case, Yates Drilling Company, seeks authority to institute a waterflood project in the Cactus Queen (Statutory) Unit Area, should the provisions of Order No. R-9075 as described in Finding Paragraph No. (4) above, be met, by the injection of water into the Southeast Chaves Queen Gas Area Associated Pool through the following described six existing wells in Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico:

Well Name and Number	Footage Location	Unit	Section	Proposed (Perforated) Interval Feet
Apache "27" State No. 2	1650' FSL - 2310' FWL	K	27	2996-3000
Burkitt Federal No. 3	330' FNL - 2310' FWL	C	34	2988-2992
Garner Federal No. 7	660' FSL - 1980' FEL	O	27	2987-2993
Doyle No. 1	660' FNL - 990' FEL	A	34	2982-2989
Doyle No. 3	1980' FSL - 990' FEL	I	27	2991-2997
Doyle No. 4	330' FS & WL	M	26	2982-2985

(8) If Order No. R-9075 is revoked, and Division Order No. R-9075-A becomes the prevailing unit order in this area the applicant seeks, in the alternative, to institute

Case No. 9810
Order No. R-9075-B
Page No. 3

two waterflood projects for the injection of water into the Southeast Chaves Queen Gas Area Associated Pool underlying the following described areas in Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico:

- (a) the first project area to be comprised of the proposed Cactus Queen (Voluntary) Unit Area, being the subject of Case No. 9823, underlying the NE/4 SW/4, S/2 SW/4, and W/2 SE/4 of Section 27 and the NW/4 NE/4 and N/2 SW/4 of Section 34, by utilizing the following described three wells for water injection:

Well Name and Number	Footage Location	Unit	Section	Proposed (Perforated) Interval Feet
Apache "27" State No. 2	1650' FSL - 2310' FWL	K	27	2996-3000
Burkitt Federal No. 3	330' FNL - 2310' FWL	C	34	2988-2992
Garner Federal No. 7	660' FSL - 1980' FEL	O	27	2987-2993

- (b) the second project to be on the "Doyle" Fee Lease comprising the SW/4 SW/4 of Section 26, the E/2 SW/4 of Section 27 and the NE/4 NE/4 of Section 34, by utilizing the following described three wells.

Well Name and Number	Footage Location	Unit	Section	Proposed (Perforated) Interval Feet
Doyle No. 1	660' FNL - 990' FEL	A	34	2982-2989
Doyle No. 3	1980' FSL - 990' FEL	I	27	2991-2997
Doyle No. 4	330' FS & WL	M	26	2982-2985

(9) In either instance the approval of either waterflood request will cover essentially the same geographical area where, pursuant to the evidence presented, the wells are in an advanced state of depletion and should be properly classified as "stripper wells."

(10) The resulting waterflood operation would result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(11) The applicant's request for two projects should be authorized at this time and should remain in effect unless Division Order No. R-9075 is placed in effect on or

Case No. 9810
Order No. R-9075-B
Page No. 4

before June 14, 1990, at which time the two waterflood projects should be merged into one and redesignated as such.

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

(13) The injection of water into each of the aforementioned injection wells in either project should be accomplished through internally plastic-lined tubing installed in a packer set approximately 100 feet above the uppermost perforations and 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.

(14) Prior to commencing injection operations into any of the wells herein authorized by this order, the casing should be pressure-tested throughout the interval, from the surface down to the proposed packer-setting depth, to assure integrity of such casing.

(15) The injection wells or injection pressurization system for each well should be so equipped as to limit injection pressure at the wellhead to no more than 600 psi.

(16) 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 high pressure will not result in migration of the injected waters from the Queen formation.

(17) The Director of the Division should also have the authority to administratively approve expansion of this waterflood project or projects by placing additional wells on injection and/or production upon proper application by the operator.

(18) 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 and of the mechanical integrity pressure-test in order that the same may be witnessed.

(19) All provisions of General Rules 701 through 708 of the Division Rules and Regulations should be followed in either case.

IT IS THEREFORE ORDERED THAT:

(1) Yates Drilling Company is hereby authorized to institute two waterflood

Case No. 9810
Order No. R-9075-B
Page No. 5

projects in Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico, by the injection of water into the Southeast Chaves Queen Gas Area Associated Pool.

(2) The first project hereby designated the Cactus Queen (Voluntary) Unit Waterflood Project, shall be comprised of the following described lands in said Township 12 South, Range 31 East, NMPM:

Section 27: NE/4 SW/4, S/2 SW/4, and W/2 SE/4
Section 34: NW/4 NE/4 and N/2 NW/4

Said area is to coincide with the boundary of the applicant's Cactus Queen (Voluntary) Unit Area, which was the subject of Division Order No. R-9075-A.

(3) Injection into said waterflood project shall be through the following described wells:

Well Name and Number	Footage Location	Unit	Section	Proposed (Perforated) Interval Feet
Apache "27" State No. 2	1650' FSL - 2310' FWL	K	27	2996-3000
Burkitt Federal No. 3	330' FNL - 2310' FWL	C	34	2988-2992
Garner Federal No. 7	660' FSL - 1980' FEL	O	27	2987-2993

(4) The second project, hereby designated the "Doyle" Fee Lease Waterflood Project, shall be comprised of the following described lands in the same Township/Range.

Section 26: SW/4 SW/4
Section 27: E/2 SE/4
Section 34: NE/4 NE/4

(5) Injection into the "Doyle" Fee Lease project shall be through the following described wells:

Well Name and Number	Footage Location	Unit	Section	Proposed (Perforated) Interval Feet
Doyle No. 1	660' FNL - 990' FEL	A	34	2982-2989
Doyle No. 3	1980' FSL - 990' FEL	I	27	2991-2997
Doyle No. 4	330' FS & WL	M	26	2982-2985

Case No. 9810
Order No. R-9075-B
Page No. 6

IT IS FURTHER ORDERED THAT:

(6) 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.

(7) Injection into each of the said wells shall be accomplished through 2 3/8-inch internally lined tubing installed in a packer set at approximately 100 feet above the uppermost perforation; the casing-tubing annulus shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak-detection device.

(8) Each 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 600 psi.

(9) 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.

(10) 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.

(11) Both the Cactus Queen (Voluntary) Unit and "Doyle" Fee Lease Waterflood Projects shall be governed by the applicable provisions of Rules 701 through 708 of the Division Rules and Regulations.

(12) Monthly progress reports for both waterflood projects herein authorized shall be submitted to the Division in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

IT IS FURTHER ORDERED THAT:

(13) Should the provisions of Division Order No. R-9075 (Cactus Queen (Statutory) Unit Agreement) be met on or before June 14, 1990, the Division shall have cause to issue an amendment to the immediate order, without further notice or cause for hearing, including provisions for the merger of the two aforementioned waterflood projects into a single project area and for the redesignation of such as the Cactus Queen (Statutory) Unit Waterflood Project.

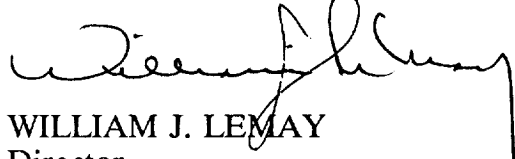
Case No. 9810
Order No. R-9075-B
Page No. 7

(14) The operator shall notify the Director of the Division within 15 days if the required percentage of interest owners have ratified the statutory unit agreement, as described in said Division Order No. R-9075. Such notification must be given to the Division on or before June 14, 1990 or this order approving two separate projects shall remain in full force and effect.

(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

S E A L