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& SHERIDAN, P.A.  
LAWYERS

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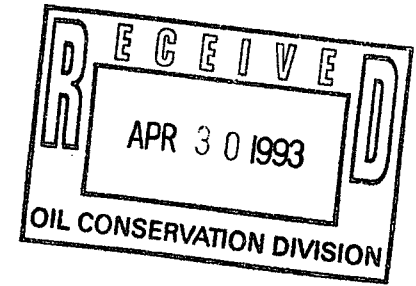
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April 30, 1993

HAND-DELIVERED



William J. LeMay, Director  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
State Land Office Building  
Santa Fe, New Mexico 87503

Re: Application of Yates Drilling Company for Administrative Approval of an Unorthodox Well Location for its Cactus Queen Unit Well No. 15 to be located 1330 feet from the North line and 2200 feet from the West line (Unit F) of Section 34, Township 12 South, Range 31 East, N.M.P.M., Chaves County, New Mexico

Dear Mr. LeMay:

Yates Drilling Company hereby requests administrative approval of an unorthodox well location for its Cactus Queen Unit Well No. 15. The proposed location will be in the Queen formation at a point 1330 feet from the North line and 2200 feet from the West line of Section 34, Township 12 South, Range 31 East, N.M.P.M., Chaves County, New Mexico. Pursuant to the provisions of Division Rule 104F, Yates seeks an exception to the Division's Statewide Spacing Rules to permit it to locate this well in the NW/4 of said Section 34 at the proposed unorthodox well location.

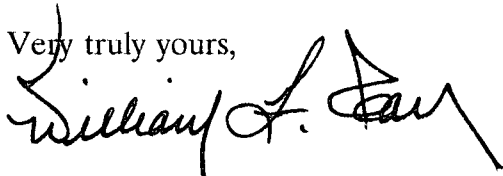
This unorthodox location is necessary to permit the completion of efficient production and injection pattern in the Yates Cactus Queen Unit Waterflood Project which has been approved by Division Order No. R-9075, as amended. In addition to the attached Oil Conservation Division Form C-102 showing the surveyed location for this well, a plat is also attached showing the proposed well location and the boundaries of the Cactus Queen Unit.

William J. LeMay, Director  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
April 30, 1993  
Page 2

As you will note, this well is in the central portion of the unit and all acreage offsetting this location is operated by Yates Drilling Company. Accordingly, there are no operators of proration or spacing units offsetting the proposed well to whom notice of this application can be given.

If you need any additional information from Yates Drilling Company to proceed with your consideration of this administrative application, please advise.

Very truly yours,

A handwritten signature in black ink, appearing to read "William F. Carr", with a stylized flourish at the end.

WILLIAM F. CARR  
ATTORNEY FOR YATES DRILLING COMPANY

WFC:mlh

Enclosures

cc w/o enc.: Mr. Doug Hurlbut  
Mr. Toby Rhodes  
Yates Drilling Company  
105 South Fourth Street  
Artesia, New Mexico 88210

Submit to Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

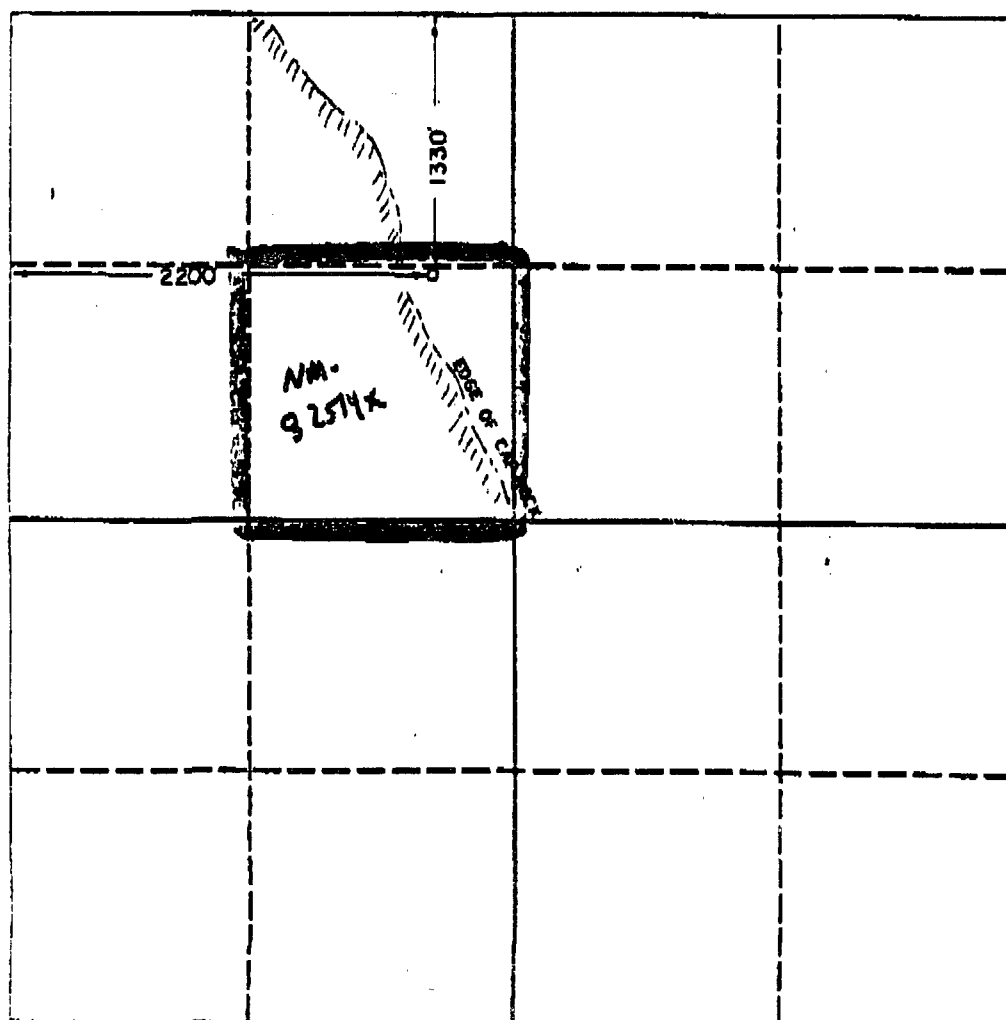
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

|  |                                     |   |                                       |                         |
|--|-------------------------------------|---|---------------------------------------|-------------------------|
| Operator<br><b>YATES DRILLING COMPANY</b>  |                                     | Lease<br><b>CACTUS QUEEN UNIT</b>           |                                       | Well No.<br><b>15</b>   |
| Unit Letter<br><b>F</b>  | Section<br><b>34</b>                | Township<br><b>12 SOUTH</b>                 | Range<br><b>31 EAST</b>               | County<br><b>CHAVES</b> |
| Actual Footage Location of Well:<br><b>1330</b> feet from the <b>NORTH</b> line and <b>2200</b> feet from the <b>WEST</b> line |                                     |   |                                       |                         |
| Ground level Elev.<br><b>4434</b>  | Producing Formation<br><b>Queen</b> | Pool<br><b>S.E. Chaves Queen Gas Assoc.</b> | Dedicated Acreage:<br><b>40</b> Acres |                         |

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?  
☐ Yes ☐ No If answer is "yes" type of consolidation \_\_\_\_\_  
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)  
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

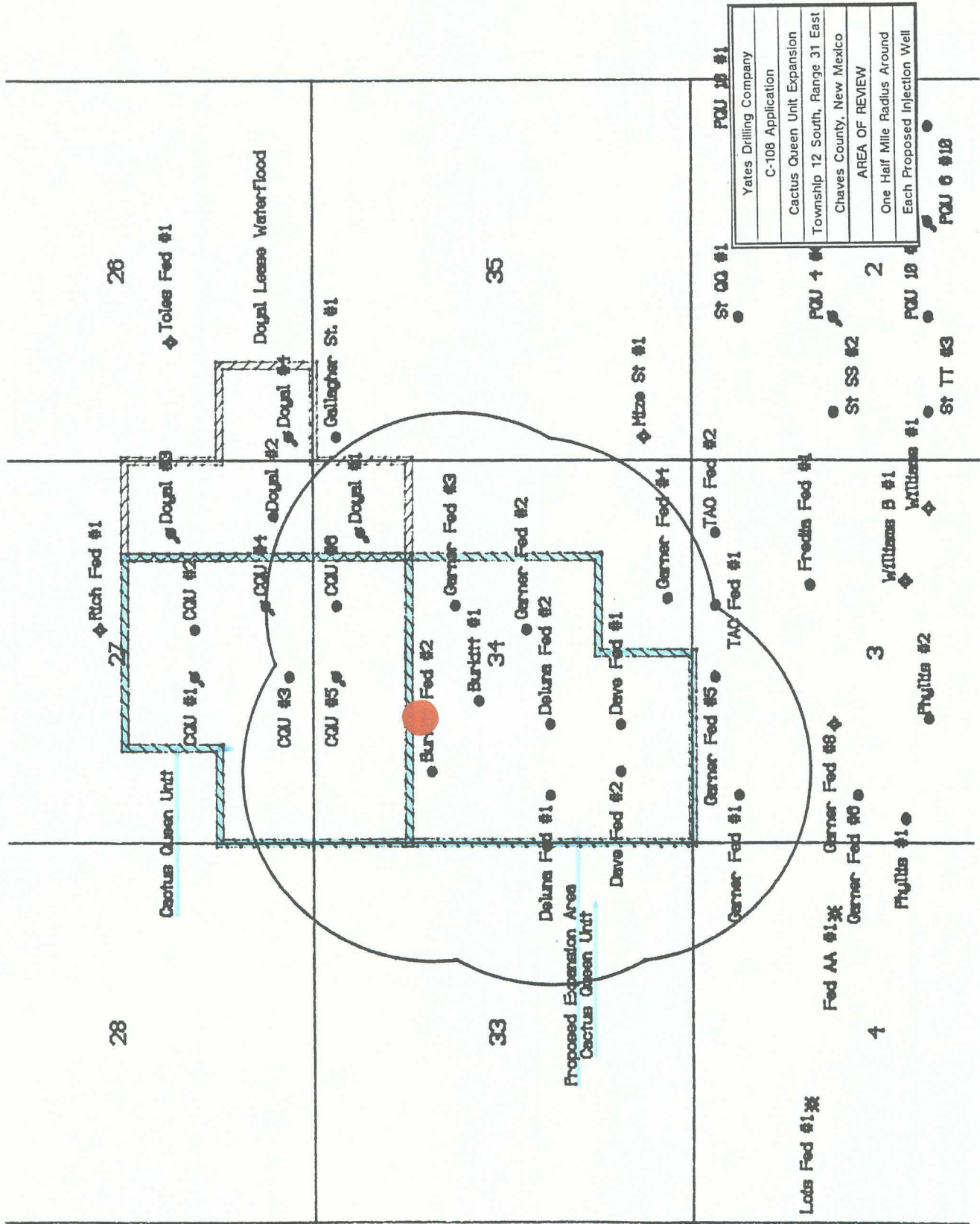
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature  
*Ken Beardsley*  
Printed Name  
**Ken Beardsley**  
Position  
**Landman**  
Company  
**Yates Drilling Co.**  
Date  
**2-24-93**

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed  
**2/10/93**  
Signature & Seal of Professional Surveyor  
*[Signature]*  
Certificate No.  
**3640**



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. 9809  
Order No. R-9075

APPLICATION OF YATES DRILLING COMPANY  
FOR STATUTORY UNITIZATION, 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, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 14th day of Decmember, 1989, 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) Division Case Nos. 9809, 9810 and 9823 were consolidated at the time of the hearing for the purpose of testimony.
- (3) The applicant, Yates Drilling Company, seeks the statutory unitization, pursuant to the "Statutory Unitization Act", Sections 70-7-1 through 70-7-21, NMSA (1978), of 560.00 acres, more or less, being a portion of the Southeast Chaves Queen Gas Area Associated Pool, Chaves County, New Mexico, said portion to be known as the Cactus Queen (statutory) Unit; the applicant further seeks approval of the Unit Agreement and the Unit Operating Agreement which were submitted in evidence as applicant's Exhibit Nos. 3A and 4A in this case.
- (4) The proposed (statutory) unit area should be designated the Cactus Queen Unit Area; and the horizontal limits of said unit area should be comprised of the following described Federal, State and Fee lands in Chaves County, New Mexico:

Case No. 9809  
Order No. R-9075  
Page 2

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

(5) The horizontal limits of said unit are within the governing boundaries of the Southeast Chaves Queen Gas Area Associated Pool and have been reasonably defined by development.

(6) The vertical limits of the Cactus Queen (statutory) Unit Area should comprise that interval which extends from an upper limit described as 50 feet above the top of the Queen formation to a lower limit at the base of the Queen formation, said limits having been previously found to occur at 2930 feet and 3100 feet, respectively, in Yates Drilling Company's Doyle Well No. 1 located 660 feet from the North line and 990 feet from the East line (Unit A) of Section 34, Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico.

(7) The unit area contains fourteen 40-acre separate tracts of land owned by seven different working interest owners.

(8) The applicant has made a good faith effort to secure voluntary unitization within the Unit Area and at the time of the hearing 100 percent of the working interest owners and approximately 42.23 percent of the royalty interest owners were effectively committed to the unit.

(9) The applicant proposes to institute a waterflood project for the secondary recovery of oil and associated gas, condensate, and all associated liquefiable hydrocarbons within and to be produced from the proposed unit area (being the subject of Division Case No. 9810).

(10) All interested parties who have not agreed to unitization were notified of the hearing by the applicant, but no person entered an appearance or opposed the application at the hearing.

(11) The proposed secondary recovery operations should result in the additional recovery of approximately 251,000 barrels of oil.

(12) The unitized management, operation and further development of the Cactus Queen (statutory) Unit Area, as proposed, is reasonably necessary to effectively carry on secondary recovery operations and will substantially increase the ultimate recovery of oil and gas from the unitized portion of the pool.

Case No. 9809  
Order No. R-9075  
Page 3

(13) The proposed unitized method of operation as applied to the Cactus Queen (statutory) Unit Area is feasible and will result with reasonable probability in the increased recovery of substantially more oil and gas from the unitized portion of the pool than would otherwise be recovered without unitization.

(14) The estimated additional costs of such operations will not exceed the estimated value of the additional oil so recovered plus a reasonable profit.

(15) Such unitization and adoption of applicant's proposed unitized method of operation will benefit the working interest owners and royalty owners of the oil and gas rights within the Cactus Queen (statutory) Unit Area.

(16) The granting of the application in this case will have no adverse effect upon the Southeast Chaves Queen Gas Area Associated Pool.

(17) The applicant's Exhibit Nos. 3A and 4A in this case, being the Statutory Unit Agreement and the Unit Statutory Operating Agreement, respectively, should be incorporated by reference into this order.

(18) The Cactus Queen (statutory) Unit Agreement and the Cactus Queen (statutory) Unit Operating Agreement provide for unitization and unit operation of the Cactus Queen (statutory) Unit Area upon terms and conditions that are fair, reasonable and equitable, and include:

- (a) an allocation to the separately owned tracts of the unit area of all oil and gas that is produced from the unit area and which is saved, being the production that is not used in the conduct of unit operations or not unavoidably lost;
- (b) a provision for the credits and charges to be made in the adjustment among the owners in the unit area for their respective investments in wells, tanks, pumps, machinery, materials and equipment contributed to the unit operators;
- (c) a provision governing how the costs of unit operations including capital investments shall be determined and charged to the separately-owned tracts and how said costs shall be paid, including a provision providing when, how and by whom such costs shall be charged to such owner, or the interest of such owner, and how his interest may be sold and the proceeds applied to the payment of his costs;

Case No. 9809  
 Order No. R-9075  
 Page 4

- (d) a provision for carrying any working interest owner on a limited, carried or net-profits basis, payable out of production, upon terms and conditions which are just and reasonable, and which allow an appropriate charge for interest for such service payable out of production, upon such terms and conditions determined by the Division to be just and reasonable;
- (e) a provision designating the Unit Operator and providing for supervision and conduct of the unit operations, including the selection, removal and substitution of an operator from among the working interest owners to conduct the unit operations;
- (f) a provision for a voting procedure for decisions on matters to be decided by the working interest owners in respect to which each working interest owner shall have a voting interest equal to his unit participation; and
- (g) the time when the unit operation shall commence and the manner in which, and the circumstances under which, the operations shall terminate and for the settlement of accounts upon such termination.

(19) The statutory unitization of the Cactus Queen Unit Area is in conformity with the above findings, and will prevent waste and protect correlative rights of all interest owners within the proposed unit area, and should be approved.

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Yates Drilling Company for the Cactus Queen (statutory) Unit Agreement, covering 560.00 acres, more or less, of Federal, State and Fee lands in the Southeast Chaves Queen Gas Area Associated Pool, Chaves County, New Mexico, is hereby approved for statutory unitization pursuant to the "Statutory Unitization Act", Sections 70-7-1 through 70-7-21, NMSA (1978).

(2) The lands covered by said Cactus Queen (statutory) Unit Agreement shall be designated the Cactus Queen (statutory) Unit Area and shall comprise 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. 9809  
Order No. R-9075  
Page 5

(3) The vertical limits of the Cactus Queen (statutory) Unit Area shall comprise that interval which extends from an upper limit described as 50 feet above the top of the Queen formation to a lower limit at the base of the Queen formation, said limits having been previously found to occur at 2930 feet and 3100 feet, respectively, in Yates Drilling Company's Doyle Well No. 1 located 660 feet from the North line and 990 feet from the East line (Unit A) of Section 34, Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico.

(4) The applicant shall institute a waterflood project for the secondary recovery of oil and associated gas, condensate and all associated liquefiable hydrocarbons within and produced from the unit area, and said waterflood project is the subject of Division Case No. 9810.

(5) The Cactus Queen (statutory) Unit Agreement and the Cactus Queen (statutory) Unit Operating Agreement, which were submitted to the Division at the time of the hearing as Exhibits 3A and 4A, respectively, are hereby incorporated by reference into this order.

(6) The Cactus Queen (statutory) Unit Agreement and the Cactus Queen (statutory) Unit Operating Agreement provide for unitization and unit operation of the Southeast Chaves Queen Gas Area Associated Pool upon terms and conditions that are fair, reasonable and equitable.

(7) Under the terms of the "Statutory Unitization Act," Section 70-7-8.A. and C., this order shall not become effective until such time as the owners of at least seventy-five percent of the interests in the unit which are free of cost have approved in writing the Unit Agreement.

**IT IS FURTHER ORDERED THAT:**

(8) If the required percentage of said interest owners in the area do not approve the Unit Agreement within a period of six months from the date of this order, this order shall cease to be of further force and effect and shall be revoked by the Division.

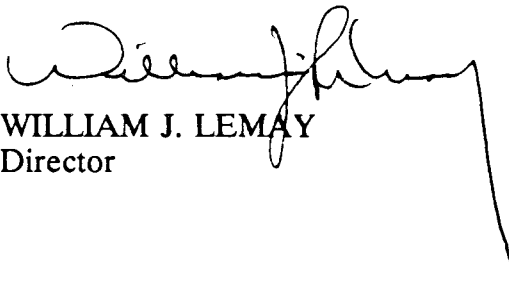
(9) The applicant as Unit Operator shall notify the Division Director in writing of any removal or substitution of said Unit Operator by any other working interest owner within the unit area.

(10) 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.

Case No. 9809  
Order No. R-9075  
Page 6

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read 'William J. Lemay', with a long, sweeping vertical line extending downwards from the end of the signature.

WILLIAM J. LEMAY  
Director

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. 9823  
ORDER NO. R-9075-A

APPLICATION OF YATES DRILLING COMPANY  
FOR A UNIT AGREEMENT, 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, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 14th day of December, 1989, 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 9810 for the purpose of testimony.
- (3) The applicant, Yates Drilling Company, seeks approval of the Cactus Queen (voluntary) Unit Area and Agreement for the purpose of establishing a secondary recovery project, covering 320 acres, more or less, of State and Federal lands in Chaves County, New Mexico, as further described in Exhibit "A" attached hereto and made a part hereof.
- (4) The applicant requests that the unitized formation be that interval underlying the unit area, the vertical limits of which extend from an upper limit described as 50 feet above the top of the Queen formation to a lower limit at the base of the Queen formation; said limits having been previously found to occur at 2930 feet and 3100 feet, respectively, in Yates Drilling Company's Doyal Well No. 1, located 660 feet from the North line and 990 feet from the East line of Section 34, Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico.

Case No. 9823  
Order No. R-9075-A  
Page No. 2

- (5) No interested party appeared and objected to the proposed unit area.
- (6) All plans of development and operation, and creations, expansions or contractions of participating areas, or expansions or contractions of the unit area should be submitted to the Director of the Division for approval.
- (7) Approval of the proposed unit agreement should promote the prevention of waste and protection of correlative rights within the unit area.
- (8) The applicant also requested at the November 29, 1989 hearing, by Division Case No. 9809, to statutorily unitize the same acreage sought in the immediate case along with additional State, Federal and Fee lands to the east; if the terms of the order authorizing statutory unitization are met, the applicant should notify the Division and this order should immediately be rescinded.

IT IS THEREFORE ORDERED THAT:

- (1) The application of Yates Drilling Company for the Cactus Queen Unit Agreement and Area comprising 320 acres, more or less, of State and Federal lands in Chaves County, New Mexico, as further described in Exhibit "A" attached hereto and made a part hereof, for the purpose of establishing a secondary recovery project is hereby approved.
- (2) The Unitized Formation shall mean that interval underlying the unit area, the vertical limits of which extend from an upper limit described as 50 feet above the top of the Queen formation to a lower limit at the base of the Queen formation; said limits having been previously found to occur at 2930 feet and 3100 feet, respectively, in Yates Drilling Company's Doyal Well No. 1, located 660 feet from the North line and 990 feet from the East line of Section 34, Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico.
- (3) The Cactus Queen (voluntary) Unit Agreement and the Cactus Queen (voluntary) Unit Operating Agreement, which were submitted at the hearing as Exhibits 3B and 4B, respectively, are hereby incorporated by reference into this order.
- (4) The plan contained in said unit agreement for the development and operation of the unit area is hereby approved in principle as a proper conservation measure; provided however, notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty or obligation which is now, or may hereafter be, vested in the Division to supervise and control operations for the unit and production of oil and gas therefrom.

Case No. 9823  
Order No. R-9075-A  
Page No. 3

(5) The unit operator shall file with the Division an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof; in the event of subsequent joinder by any other party or expansion or contraction of the unit area, the unit operator shall file with the Division Director the agreement reflecting the subscription of those interests having joined or ratified.

(6) All plans of development and operation, all unit participating areas and expansions or contractions of the unit area, shall be submitted to the Director of the Oil Conservation Division for approval.

(7) This order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico and the Director of the appropriate agency of the United States Department of Interior; this order shall terminate ipso facto upon the termination of said unit agreement; and the last unit operator shall notify the Division immediately in writing of such termination.

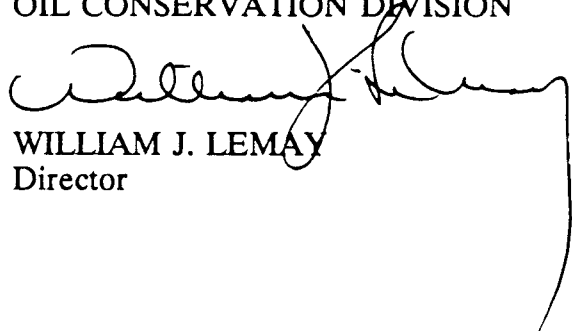
IT IS FURTHER ORDERED HOWEVER THAT:

(8) If the terms of the order issued in Division Case No. 9809 are met within the prescribed time, the applicant shall notify the Division and this order shall be rescinded.

(9) 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

EXHIBIT "A"  
CASE NO. 9823  
ORDER NO. R-9075-A  
CACTUS QUEEN UNIT AREA  
CHAVES COUNTY, NEW MEXICO

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

Comprising 320 acres, more or less, of State and Federal Lands.

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. 10641  
ORDER NO. R-9075-A-1

APPLICATION OF YATES DRILLING COMPANY  
FOR EXPANSION OF A UNIT AREA AND TO AMEND  
DIVISION ORDER NO. R-9075-A, CHAVES COUNTY,  
NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on December 17, 1992, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 26th day of January, 1993 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 No. 10642 for the purpose of testimony.

(3) By Division Order No. R-9075-A, issued in Case No. 9823 and dated December 14, 1989, the Division approved the Yates Drilling Company Cactus Queen (Voluntary) Unit Agreement for the purpose of establishing a secondary recovery project in the Queen formation 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 NW/4 of Section 34, Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico.

(4) The applicant, Yates Drilling Company, now seeks to expand said Cactus Queen (Voluntary) Unit Area by including therein an additional 320 acres, more or less, of Federal lands comprising the SW/4 NE/4, S/2 NW/4, SW/4, and NW/4 SE/4 of said Section 34. Said expanded unit would be comprised of the NE/4 SW/4, S/2 SW/4, and W/2 SE/4 of said Section 27 and the W/2 NE/4, W/2 and NW/4 SE/4 of said Section 34, containing 640 acres, more or less, of state (120 acres or 18.75%) and federal (520 acres or 81.25%) lands.

(5) The applicant's Exhibit Nos. 3 and 4 in this case, being the Unit Agreement and the Unit Operating Agreement, respectively, should be incorporated by reference into this order.

(6) The proposed expansion will prevent waste and protect correlative rights, will tend to conserve oil and gas and should be approved.

(7) The terms and conditions of Division Order No. R-9075-A should apply to the expanded unit to the extent not inconsistent with this order.

IT IS THEREFORE ORDERED THAT:

(1) The Yates Drilling Company's Cactus Queen (Voluntary) Unit Agreement and Area as approved by Division Order No. R-9075-A is hereby expanded to include several tracts of federal lands, comprising 320 acres, more or less, and consisting of the SW/4 NE/4, S/2 NW/4, SW/4, and NW/4 SE/4 of Section 34, Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico, so that the unit area, as expanded, will contain 640 acres, more or less, of state (120 acres or 18.75%) and federal (520 acres or 81.25%) lands and comprise the NE/4 SW/4, S/2 SW/4 and W/2 SE/4 of Section 27 and the W/2 NE/4, W/2 and NW/4 SE/4 of Section 34, all in Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico.

(2) The expanded unit and unit area shall be subject to the terms and requirements contained in Order No. R-9075-A and shall become effective as provided in the unit agreement.

(3) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

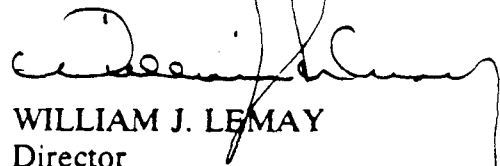


Case No. 10641  
Order No. R-9075-A-1  
Page No. 3

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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

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<br>(Perforated) Interval<br>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

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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<br>(Perforated) Interval<br>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<br>(Perforated) Interval<br>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

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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

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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<br>(Perforated) Interval<br>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<br>(Perforated) Interval<br>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                                 |

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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.

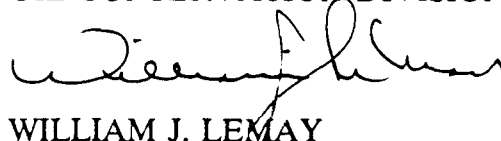
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(14) The operator shall notify the Director of the Division within 15 days if the required percentage of interest owners have ratified the statutory unit agreement, as described in said Division Order No. R-9075. Such notification must be given to 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



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. 10642  
ORDER NO. R-9075-B-1

APPLICATION OF YATES DRILLING COMPANY FOR THE EXPANSION OF THE  
CACTUS QUEEN (VOLUNTARY) UNIT WATERFLOOD PROJECT AREA, TO  
AMEND DIVISION ORDER NO. R-9075-B, AND TO QUALIFY SAID EXPANSION  
AREA FOR THE RECOVERED OIL TAX RATE PURSUANT TO THE "NEW MEXICO  
ENHANCED OIL RECOVERY ACT", CHAVES COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on December 17, 1992, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 26th day of January, 1993 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 Case No. 10641 for the purpose of testimony.

(3) Division Order No. R-9075-B, issued in Case No. 9810 and dated March 15, 1990, authorized, in part, Yates Drilling Company to institute a waterflood project in the Southeast Chaves Queen Gas Area Associated Pool designated the Cactus Queen (Voluntary) Unit Waterflood Project in a unit area with the same designation (approved by Division Order No. R-9075-A) both comprising the following described 320 acres in Township 12 South, Range 31 East, NMPM, Chaves County, New Mexico:

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.

(4) The applicant, Yates Drilling Company, now seeks to expand the previously approved waterflood project area to include an additional 320 acres comprising the SW/4 NE/4, S/2 NW/4, SW/4, and NW/4 SE/4 of said Section 34, which would make the project area conterminous with the proposed expanded Cactus Queen (Voluntary) Unit Area, being the subject of Division Case No. 10641.

(5) The operator proposes to inject water into the Queen interval within said expanded area through the following Queen producing wells to be converted to injectors:

| Well Name and Number  | Footage Location     | Unit | Perforated Interval<br>(feet) |
|-----------------------|----------------------|------|-------------------------------|
| Burkitt Federal No. 2 | 1650' FNL - 990' FWL | E    | 2754 - 2760                   |
| Dave Federal No. 2    | 990' FS & WL         | M    | 2723 - 2730                   |
| DeLuna Federal No. 1  | 1980' FSL - 660' FWL | L    | 2718 - 2724                   |
| Garner Federal No. 2  | 2310' FS & EL        | J    | 2982 - 2990                   |
| Garner Federal No. 3  | 1980' FN & EL        | G    | 2981 - 2986                   |

(6) The wells in the proposed expanded area are in an advanced state of depletion and should be properly classified as "stripper" wells.

(7) Expansion of the project area as requested will serve the interests of conservation of oil and gas, should result in the recovery of otherwise unrecoverable oil, and will prevent waste.

(8) The expanded area, including the five proposed injection wells, should be subject to all applicable terms and requirements of Division Order No. R-9075-B.

(9) The applicant further seeks an order pursuant to the Rules and Procedures for Qualifications of Enhanced Oil Recovery Projects and Certification of Recovered Oil Tax Rates, as promulgated by Division Order No. R-9708, qualifying said expanded area for the recovered oil tax rate under the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(10) Based on the record in Case No. 9810 and on the testimony presented in this case:

- (a) the application of water injection in the expanded area should result in an increase in the amount of crude oil ultimately recovered therefrom (an approximation of 250,000 barrels was given by the applicant as a rough estimate);
- (b) the project area has been so depleted that it is prudent to implement a waterflood to maximize the ultimate recovery of crude oil from the expanded area; and,
- (c) the proposed expanded waterflood project is economically and technically feasible and has not been prematurely filed.

(11) The subject expanded area should be qualified an "Enhanced Oil Recovery Project" (EOR) pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(12) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which will specify the proposed project area as described above.

(13) At such time as a positive production response occurs and within five years from the date of Certification of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for credit. The Division may review the application administratively or set it for hearing. Based on the evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for credit.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Yates Drilling Company, is hereby authorized to expand its Cactus Queen (Voluntary) Unit Waterflood Project Area, as defined and authorized by Division Order No. R-9075-B, issued in Case No. 9810 and dated March 15, 1990, to include an additional 320 acres, more or less, comprising the SW/4 NE/4, S/2 NW/4, SW/4 and NW/4 SE/4 of Section 34, Township 12 South, Range 31 East, NMPM, Southeast Chaves Queen Gas Area Associated Pool, Chaves County, New Mexico.

(2) Injection into the "expanded area" shall be through the following described five existing wells to be converted from producing wells to injectors:

| Well Name and Number  | Footage Location     | Unit | Perforated Interval<br>(feet) |
|-----------------------|----------------------|------|-------------------------------|
| Burkitt Federal No. 2 | 1650' FNL - 990' FWL | E    | 2754 - 2760                   |
| Dave Federal No. 2    | 990' FS & WL         | M    | 2723 - 2730                   |
| DeLuna Federal No. 1  | 1980' FSL - 660' FWL | L    | 2718 - 2724                   |
| Garner Federal No. 2  | 2310' FS & EL        | J    | 2982 - 2990                   |
| Garner Federal No. 3  | 1980' FN & EL        | G    | 2981 - 2986                   |

(3) The expanded area including the five above-described injection wells shall be subject to all applicable terms and requirements of Division Order No. R-9075-B.

**IT IS FURTHER ORDERED THAT:**

(4) The subject "enhanced oil recovery project area" shall initially comprise the following described area in Chaves County, New Mexico:

**TOWNSHIP 12 SOUTH, RANGE 31 EAST, NMPM**

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

(5) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of EOR Project, which certificate will specify the proposed project area as described above.

(6) At such time as a positive production response occurs, and within five years from the date of the Certificate of EOR Project, the applicant must apply to the Division for certificate of positive production response, which shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for credit. The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for credit.

(7) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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Order No. R-9075-B-1  
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DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in dark ink, appearing to read 'William J. Lemay', with a long, sweeping vertical line extending downwards from the end of the signature.

WILLIAM J. LEMAY  
Director

SEAL