

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF GREAT WESTERN DRILLING COMPANY
FOR APPROVAL OF THE GRAIN QUEEN
UNIT AGREEMENT FOR THE PURPOSE OF
SECONDARY RECOVERY OPERATIONS, FOR
AUTHORITY TO INSTITUTE A WATER-
FLOOD PROJECT IN THE CAPROCK QUEEN
POOL AND FOR EXPANSION THEREOF BY
ADMINISTRATIVE PROCEDURE, AND FOR
AUTHORITY TO COMMINGLE THE PRODUCT-
ION FROM ALL WELLS PRODUCING UNITI-
ZED SUBSTANCES WITHIN THE UNIT AREA;
ALL IN LEA COUNTY, NEW MEXICO

Case No. 2293

TO: The Oil Conservation Commission
State of New Mexico
Santa Fe, New Mexico

Comes now the Applicant, GREAT WESTERN DRILLING COMPANY, whose address is Box 1659, Midland, Texas, and files herewith a copy of the proposed Grain Queen Unit Agreement (identified as Exhibit 1 to this Application) for the development and operation of the Grain Queen Unit Area in Lea County, New Mexico, and hereby makes application for (i) approval of the Grain Queen Unit Agreement for the purpose of secondary recovery operations, (ii) for authority to institute a waterflood project in the Caprock Queen Pool and for expansion thereof by administrative procedure and to assign special allowable to the wells within such project as are within a buffer zone, and (iii) for authority to commingle the production from all wells producing Unitized Substances (as such is defined in the Unit Agreement) within the Unit Area; and in support thereof states:

*Robert
Miles
5-11-64*

I.

UNIT AGREEMENT

1. That the proposed Unit Area covered by the Unit Agreement embraces 200 acres more or less, more particularly described as follows:

Township 13 South, Range 32 East, N.M.P.M.

Section 5: $SE\frac{1}{4}NW\frac{1}{4}$, $NE\frac{1}{4}SW\frac{1}{4}$, $S\frac{1}{2}SW\frac{1}{4}$
Section 8: $NE\frac{1}{4}NW\frac{1}{4}$

✓ 2. That the proposed Unit Area is comprised of 160 acres of State of New Mexico lands and 40 acres of privately owned lands.

3. Applicant is informed and believes, and upon such information and belief states: that the lands to be embraced in the proposed Unit Area cover all or substantially all of the available lands necessary for the effective and efficient institution of a secondary recovery operation by the institution of a waterflood project, and that said Unit Agreement will permit the producing area to be developed and operated in the interest of conservation, the protection of correlative rights and the prevention of waste of Unitized Substances.

4. That Great Western Drilling Company is designated as Unit Operator in the Unit Agreement, and as such is given authority under the terms thereof to carry on operations necessary and proper for the development and operation of the Unit Area and the recovery of Unitized Substances, subject to all applicable laws and regulations. That said Unit Agreement provides for the institution of a secondary recovery operation by the institution of a waterflood project in the Caprock Queen Pool as more fully stated hereinbelow.

5. That said Unit Agreement is in substantially the same form as Unit Agreements heretofore approved by the Commissioner of Public Lands of the State of New Mexico and the Oil Conservation Commission of the State of New Mexico; it is believed that the field or area involved can be developed more economically and efficiently under the terms of said Unit Agreement to the end that the maximum recovery of Unitized Substances can be obtained without the violation of correlative rights.

6. That application has been made for the approval of said Unit Agreement to the Commissioner of Public Lands of the State of New Mexico, and that prior to the hearing on this Application, informal approval of the form and context of said Unit Agreement will be obtained from the Commissioner. That after formal approval thereof by the Commissioner, a fully executed and approved copy of the Unit Agreement, and a copy of such approval by the Commissioner, will be filed with this Commission.

II.

WATERFLOOD PROJECT

1. A plat showing the location of the proposed injection wells and the location of all other wells within a radius of two miles of said proposed injection wells, and the formation from which said wells are producing or have produced is attached hereto and marked Exhibit 2 to this Application. Said plat also indicates the lessees (or Unit Operators) within said two mile radius.

2. All available logs of the proposed injection wells (being Wells "R" No. 4 and "S" No. 4) are filed herewith.

3. The proposed injection wells' casing program is as follows: the injection wells' casing is $4\frac{1}{2}$ inch to $5\frac{1}{2}$ inch casing set at the top of the Queen Formation pay zone. The proposed

method for testing casing before use of the injection wells will be in conformity with the established rules of the Commission, including Rule 107 and 702, and all other applicable law and regulation.

4. (a) The name and depth of the zone or formation into which injection will be made is the Queen Sand formation, which is defined in said Unit Agreement as and to mean that heretofore established underground reservoir, a member of the Queen formation of the Guadalupe Series, a part of the Permian System, which is found at 3018 to 3026 feet in the Great Western Drilling Company State TT #1 Well located 660' FNL & 660' FEL, Sec. 2, T. 13 S., R. 31 E., N.M.P.M.

(b) The kind of fluid to be injected is water.

(c) The anticipated amount to be injected is estimated at approximately 500 barrels of water daily to "fill up" and thereafter a decreasing amount of water sufficient to maintain effective and efficient secondary recovery operations.

(d) The source of the injection fluid is fresh water to be obtained by purchase from the Unit Operator of the North Caprock Queen Unit No. 1, which Unit lies immediately west and adjacent to the Grain Queen Unit Area.

5. In view of the production and allowables assigned to surrounding wells, it is believed that the above lands and wells are best susceptible to a water flood project rather than a pressure maintenance project.

6. Applicant requests that an allowable be assigned to this waterflood project in accordance with applicable rule and regulation, and in this connection Applicant states that all of the initial project area is within a buffer zone and as such is entitled to a special allowable for the protection of correlative rights in conformity with Rule 701 of this Commission.

7. The initial project area proposed under this Application embraces all of the Unit Area; however, the Unit Agreement provides for expansion of the Unit Area, and in the event of such expansion Applicant requests that the Order entered approving this waterflood project provide that an expansion of the waterflood project may be authorized by administrative procedure in accordance with applicable rule or regulation.

8. Applicant has made compliance with the Commission's Memorandum No. 5-58, dated January 31, 1958.

III.

COMMINGLING

1. Applicant requests permission to commingle the production of Unitized Substances from all leases within the exterior boundaries of the above Unit Area. Applicant is informed and believes, and upon such information and belief states: that such commingling will neither cause waste nor impair correlative rights and that all production so proposed to be commingled is uniform and similar in composition, gravity, and component parts.

2. As an exception to Rule 309 (a) of this Commission, Applicant further requests authority to transport Unitized Substances from the unitized formations in the various leases within the exterior boundaries of the Unit Agreement prior to such Unitized Substances having been received and measured into tanks located on the individual leases. Applicant believes and states that adequate tankage and other equipment can be installed so that production from the Unit Area can be accurately determined at reasonable intervals without separately measuring such Unitized Substances in tanks located on the individual leases. In this connection it is proposed to transport such Unitized Substances from as many as 3 wells within the Unit Area to one central location

within the Unit Area for the purpose of receiving and measuring such production. Appropriate lines will be laid from each well into the central gathering system.

3. Applicant offers to comply with all reasonable rules and regulations of the Commission relative to the testing, storage and metering of the Unitized Substances requested to be so commingled, and Applicant further offers to file all required, or reasonably requested, reports in connection therewith.

WHEREFORE, Applicant respectfully requests that this Application be set before an Examiner Hearing at Santa Fe, New Mexico, and that upon such hearing the Commission enter its Order:

m.v. ↓

(a) Approving in principal as a proper conservation measure the Grain Queen Unit Agreement; provided however that notwithstanding any of the provisions contained in said Unit Agreement that such approval not be considered as waiving or relinquishing in any manner any right, duty or obligation which now, or may hereafter be, vested in the New Mexico Oil Conservation Commission by law relative to the supervision and control of operations for the exploration and development of any land committed to the Grain Queen Unit Agreement, or relative to the production of oil or gas therefrom; and,

(b) Designate the Unit Area of the Grain Queen Unit as the lands described in Paragraph I, 1, hereinabove, and provide that the Unit Area may be expanded or contracted as provided in said Unit Agreement; and,

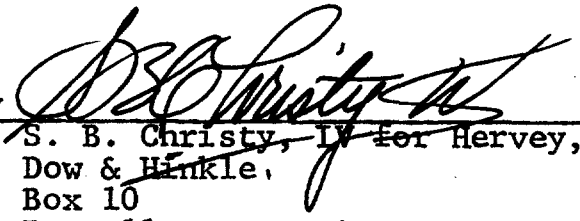
(c) Authorize Applicant as Operator of the Grain Queen Unit to institute a waterflood project in the manner and mode set forth in Paragraph II, hereinabove, including the authority to expand such waterflood project, in the event the Unit Area is expanded, by administrative procedure in accordance with applicable rule; and,

(d) Assign a special allowable to said waterflood project equal to the capacity of the wells within the waterflood project to produce Unitized Substances; and,

(e) Commingle the production from separate leases within the Unit Area and to produce all Unitized Substances within the Unit Area into a common tank battery in the mode and manner set forth in Paragraph III hereinabove.

DATED this 3rd day of May, 1961.

GREAT WESTERN DRILLING COMPANY

By 
S. B. Christy, IV for Hervey,
Dow & Hinkle,
Box 10
Roswell, New Mexico

Attorneys for the Applicant

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(b) Designate the Unit Area of the Grain Queen Unit as the lands described in Paragraph I, 1, hereinabove, and provide that the Unit Area may be expanded or contracted as provided in said Unit Agreement; and,

(c) Authorize Applicant as Operator of the Grain Queen Unit to institute a waterflood project in the manner and mode set forth in Paragraph II, hereinabove, including the authority to expand such waterflood project, in the event the Unit Area is expanded, by administrative procedure in accordance with applicable rule; and,

(c) That each beneficiary institution of the State of New Mexico will receive its fair and equitable share of the recoverable oil and gas under its lands within the Unit Area.

(d) That such Unit Agreement is in other respects for the best interest of the State of New Mexico with respect to State land.

3. That the lands to be embraced in the proposed Unit Area cover all or substantially all of the available lands necessary for the effective and efficient institution of a secondary recovery operation by the institution of a waterflood project, the various procedures of which are set forth in detail either in the attached Unit Agreement, or in the application made by this Applicant to the New Mexico Oil Conservation Commission in Case No. _____, a copy of which such application is likewise attached hereto and marked Exhibit "3". That said Unit Agreement is in all respects in the interest of conservation, the protection of correlative rights, and for the best interest of the State of New Mexico.

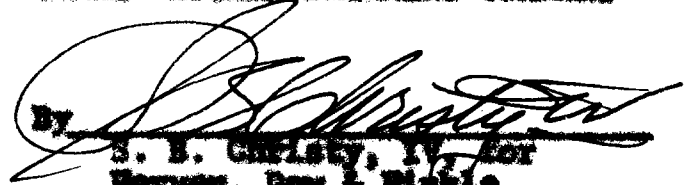
4. A filing fee in the amount of \$20.00 is submitted herewith.

WHEREFORE, Applicant respectfully requests that said Unit Agreement be approved by the Commissioner of Public Lands of the State of New Mexico as provided by law and applicable regulation.

DATED this 3rd day of May, 1961.

ILLEGIBLE

GREAT WESTERN DRILLING COMPANY

By 
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Attorneys for the Applicant