

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:

*m. S.*  
*11/22/91*  
**DRAFT**  
*DAB 11/26*  
*WJ 11/21/91*  
CASE NO. 10326  
ORDER NO. R-4676-A

APPLICATION OF BURNETT OIL COMPANY, INC.  
FOR AREA EXPANSION OF ITS GISSLER B-11  
WATERFLOOD EXPANSION OF ITS GRAYBURG JACKSON-  
SAN ANDRES WATERFLOOD PROJECT, EDDY COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 13, 1991, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this December day of ~~November~~, 1991 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) By Division Order No. R-4676, dated November 20, 1973, the Gissler B-11 Waterflood Project was established for the purpose of injecting water into the Grayburg and San Andres formations to recover secondary oil production from the Gissler "B" Lease underlying portions of Section 11, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.

(3) By Division Administrative Order WFX-604, dated February 12, 1991, said project was expanded to include seven additional injection wells on the Gissler "B" Lease (three wells in said Section 11 and 2 wells in adjacent Sections 12 and 14).

*each*

(4) Within all or portions of Sections 11, 12, 13, 14, 23 and 24, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico, Burnett Oil Company, Inc. operates the Grayburg Jackson (San Andres) Unit in which the San Andres formation is under waterflood pursuant to Division Order No. R-3257, dated June 8, 1967.

(5) The applicant, Burnett Oil Company, Inc., at this time, seeks authority to expand the Gissler B-11 Waterflood Project Area, to include an additional 200 acres on its Gissler and Gissler "A" Leases comprising the S/2 SE/4 of said Section 11, N/2 NE/4 of said Section 14, and the SW/4 SW/4 of said Section 12. The applicant further seeks authority to convert the Gissler "A" Well Nos. 12 and 13 located, respectively, in Unit P of said Section 11 and Unit B of said Section 14 to water injection wells in the Grayburg formation only.

(6) At the time of the hearing the applicant requested that the portion of its application seeking to expand its Grayburg Jackson San Andres Unit Waterflood Project to include both wells by extending the injection intervals into the San Andres formation as well be dismissed.

(7) The entire area encompassing the Gissler "B", Gissler "A" and Gissler leases and the Grayburg Jackson San Andres Unit ~~are~~ within the boundary of the Grayburg Jackson Queen-Grayburg Jackson-San Andres-Seven Rivers Pool. However, since the previous waterflood orders restricted the zone of injection into the Grayburg and/or San Andres formations, only formation names, not pool names, will be referenced.

(8) By the evidence presented at the hearing the addition of the two subject wells would serve to recover additional reserves from the Grayburg formation and would also effectively complete an existing injection/production pattern within the immediate surrounding area of the Gissler B-11 Waterflood Project.

(9) No interested party appeared at the hearing in opposition to this application.

(10) In approving this application the Division feels it necessary to rename the Gissler B-11 Project, establish a horizontal boundary for the existing project and form a cooperative waterflood project comprising the applicant's three leases. Also, since this particular area overlaps the Grayburg Jackson San Andres Unit where the injection zone is restricted to the San Andres formation, the redesignated "Gissler" projection should have established within its horizontal extent varying vertical limits so that the unitized area will not be affected.

(11) The horizontal extent of Burnett's Gissler leases located in Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico ~~are~~<sup>is</sup> as follows:

**GISSLER LEASE (NM-2746)**

Section 11: SW/4 SE/4

**GISSLER "A" LEASE (LC-029338)**

Section 11: SE/4 SE/4

Section 12: SW/4 SW/4

Section 14: N/2 NE/4

**GISSLER "B" LEASE (NM-2748)**

Section 11: W/2 NE/4, W/2, N/2 SE/4

Section 12: E/2 NW/4

Section 14: N/2 NW/4

**GISSLER "B" LEASE (NM-074939)**

Section 12: N/2 SW/4

Section 14: S/2 NW/4

(12) The Grayburg Jackson San Andres Unit comprises the following acreage in said Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico:

Section 11: SE/4 SE/4

Section 12: NE/4 and S/2

Section 13: All

Section 14: E/2, S/2 NW/4, N/2 SW/4, and SE/4 SW/4

Section 23: N/2 NE/4

Section 24: NE/4, N/2 NW/4, and SE/4 NW/4

(13) The Gissler B-11 Waterflood Project authorized by said Order No. R-4676 should be redesignated the Gissler Cooperative Lease Waterflood Project and should comprise the ~~areal~~<sup>areal</sup> extent described in Finding Paragraph No. (II) above; however injection in that portion of the redesignated area enveloping the Grayburg Jackson San Andres Unit should be restricted to the Grayburg formation. Anywhere outside the overlapping area can be extended to both the Grayburg and San Andres formations.

(14) Injection into the No. 12 well should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer to be set at approximately 2930 feet, with reinjection of produced water from the Grayburg Jackson San Andres Unit into the perforated interval from approximately 2980 to 3009 feet.

(15) Injection into the No. 13 well should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer to be set at approximately 2779 feet, with reinjection of produced water from the Grayburg Jackson San Andres Unit into the perforated interval from approximately 2829 feet to 2928 feet.

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

(17) The casing-tubing annulus for both wells 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.

(18) 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 570 psi.

(19) 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.

(20) 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 higher pressure will not result in migration of the injected waters from the Grayburg formation.

(21) Both wells should be governed by the applicable provisions of Rules 702 through 708 of the Division General Rules and Regulations.

(22) All provisions of previous Order No. R-4676 should remain in full force and effect until further notice.

(23) 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.

**IT IS THEREFORE ORDERED THAT:**

(1) The Burnett Oil Company, Inc. Gissler B-11 Waterflood Project authorized by Division Order No. R-4676, dated November 20, 1973, is hereby redesignated the Gissler Cooperative Lease Waterflood Project and shall comprise the indicated vertical limits underlying the following area in Township 17 South, Range 30 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico:

**GRAYBURG AND SAN ANDRES FORMATIONS**

Section 11: W/2 NE/4, W/2, N/2 SE/4, and SW/4 SE/4  
Section 12: E/2 NW/4  
Section 14: N/2 NW/4

**GRAYBURG FORMATION ONLY**

Section 11: SE/4 SE/4  
Section 12: N/2 SW/4 and SW/4 SW/4  
Section 14: N/2 NE/4 and S/2 NW/4

(2) The applicant, Burnett Oil Company, Inc., is hereby authorized to expand said project by converting its Gissler "A" Well Nos. 12 and 13 located, respectively, in Unit P of said Section 11 and Unit B of said Section 14 from producing oil wells to water injection wells in the Grayburg formation only.

(3) Injection into the No. 12 well shall be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer to be set at approximately 2930 feet, with reinjection of produced water from the Grayburg Jackson San Andres Unit into the perforated interval from approximately 2980 to 3009 feet.

(4) Injection into the No. 13 well shall be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer to be set at approximately 2779 feet, with reinjection of produced water from the Grayburg Jackson San Andres Unit into the perforated interval from approximately 2829 feet to 2928 feet.

(5) The casing-tubing annulus for both wells 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.

(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 Artesia District Office.

(7) The injection wells or pressurization system shall be equipped with a pressure-limiting switch or other acceptable device which will limit the wellhead pressure to no more than 570 psi.

(8) The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said wells that such higher pressure will not result in migration of the injected fluid from the Grayburg formation.

(9) The operator shall notify the supervisor of the Artesia 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 Artesia 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.

(11) Both wells shall be governed by the applicable provisions of Rules 702 through 708 of the Division Rules and Regulations.

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

(13) The portion of this application seeking to expand its Grayburg Jackson San Andres Unit Waterflood Project to include both wells by extending the injection intervals into the San Andres formation as well shall be dismissed.

(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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