

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
DIVISION FOR THE PURPOSE OF  
CONSIDERING:

CASE NO. 8840  
Order No. R-8140-A

APPLICATION OF BURK ROYALTY COMPANY  
FOR A WATERFLOOD PROJECT, CHAVES  
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 5, 1986, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 14th day of November, 1986, 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, Burk Royalty Company, seeks authority to institute a waterflood project on its South Lucky Lake Queen Unit by the injection of water at a pressure in excess of 0.2 psi per foot of depth to the uppermost perforation in the Queen formation through seven existing wells, as described on Exhibit "A" attached hereto and made a part hereof, all located in Sections 15, 16, 21, 22 and 27, Township 15 South, Range 29 East, NMPM, South Lucky Lake-Queen Pool, Chaves County, New Mexico.

(3) The project area should consist of that area within the boundary of the South Lucky Lake Queen Unit Area, as described below, which was approved by Division Order No. R-8140 issued in Case No. 8808 and dated January 30, 1986:

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TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM  
CHAVES COUNTY, NEW MEXICO

Section 15: SW/4 SW/4  
Section 16: SE/4 SW/4, NW/4 SE/4, S/2 SE/4  
Section 21: NW/4 NE/4, E/2 E/2  
Section 22: W/2  
Section 27: W/2 NW/4  
Section 28: E/2 NE/4

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

(5) The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

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

(7) Injection should be accomplished through plastic-lined tubing installed in a packer set approximately 100 feet above the uppermost perforation, or in the case of an open hole completion, approximately 100 feet above the casing shoe. The casing-tubing annulus in each injection well should be filled with an inert fluid and a surface pressure gauge or approved leak detection device should be attached to the annulus.

(8) The evidence presented at the time of the hearing is insufficient at this time to allow an injection pressure which exceeds 0.2 psi per foot of depth to the uppermost perforation in any of the proposed injection wells and the project injection wells or injection pressurization system should therefore be equipped with a pressure control device so as to limit injection pressure at the wellhead to no more than said 0.2 psi but the Division Director should have authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that an increase in pressure is warranted.

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

(10) The operator should give advance notification to the supervisor of the Artesia 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.

(11) The subject application should be approved and the project should be governed by the provisions of Rules 702 through 708 of the Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Burk Royalty Company, is hereby authorized to institute and operate a waterflood project in the South Lucky Lake Queen Unit Area (as described in Finding Paragraph No. (3) of this order) by the injection of water into the Queen formation through the seven existing wells, as described on Exhibit "A" attached hereto and made a part hereof, all located in Sections 15, 16, 21, 22, and 27, Township 15 South, Range 29 East, NMPM, South Lucky Lake-Queen Pool, Chaves County, New Mexico.

PROVIDED FURTHER THAT, prior to commencing injection operations, the casing in 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 district office at Artesia.

(2) Injection into each of said wells shall be through internally coated tubing installed in a packer set approximately 100 feet above the uppermost perforation; the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(3) 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.

(4) The operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing well, 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.

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(5) The injection wells herein authorized and/or the injection pressurization system shall be so equipped as to limit injection pressure at the wellhead to no more than 0.2 psi per foot of depth to the uppermost perforation; the Division Director may authorize a higher surface injection pressure upon satisfactory showing that such pressure will not result in fracturing of the confining strata.

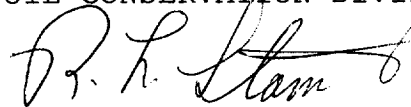
(6) The subject waterflood project is hereby designated the South Lucky Lake Queen Unit Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

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

(8) 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



R. L. STAMETS,  
Director

S E A L

EXHIBIT "A"  
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SOUTH LUCKY LAKE QUEEN UNIT  
WATERFLOOD PROJECT  
INJECTION WELLS

<u>Tract and Well Numbers</u>	<u>Locations</u>
Tract 1-Well No. 1	1980' FNL - 330' FWL (Unit E) Sec. 27
Tract 2-Well No. 1	2310' FSL - 330' FWL (Unit L) Sec. 22
Tract 2-Well No. 4	990' FSL - 1477' FWL (Unit N) Sec. 22
Tract 3-Well No. 1	2310' FNL - 1650' FWL (Unit F) Sec. 22
Tract 4-Well No. 1	1980' FNL - 660' FEL (Unit H) Sec. 21
Tract 5-Well No. 1	330' FS & WL (Unit M) Sec. 15
Tract 7-Well No. 1	660' FSL - 1980' FEL (Unit O) Sec. 16.

All wells located in Township 15 South, Range 29 East, NMPM,  
Chaves County, New Mexico.