



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**  
Governor  
**Jennifer A. Salisbury**  
Cabinet Secretary

**Lori Wrotenbery**  
Director  
Oil Conservation Division

August 11, 2000

Queen Sand Operating Company  
13760 Noel Road, Suite 1030, L.B. #44  
Dallas, Texas 75240-7336

Attn: Mr. James L. Hull, Jr.

**RE: Injection Pressure Increase,  
Drickey Queen Sand Unit Waterflood  
Chaves County, New Mexico**

Reference is made to your request dated August 10, 2000 to increase the surface injection pressure on the following wells. This request is based on a step rate tests conducted on July 18, 19 and 20, 2000. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on the following wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

<i>Well and Location</i>	<i>Maximum Surface Injection Pressure Water</i>
<i>DQSU Well No. 54 (API No. 30-005-21156) Unit P, Section 15, Township 14 South, Range 31 East</i>	<i>1784 PSIG</i>
<i>DQSU Well No. 55 (API No. 30-005-21157) Unit M, Section 15, Township 14 South, Range 31 East</i>	<i>1633 PSIG</i>
<i>DQSU Well No. 56 (API No. 30-005-21153) Unit D, Section 15, Township 14 South, Range 31 East</i>	<i>1556 PSIG</i>

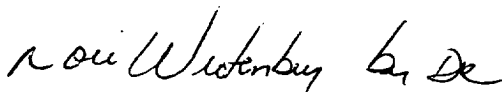
*Injection Pressure Increase  
Queen Sand Operating Company  
August 11, 2000  
Page 2*

<i>Well Identification</i>	<i>Maximum Surface Injection Pressure Water</i>
<i>DQSU Well No. 57 (API No. 30-005-21154) Unit A, Section 15, Township 14 South, Range 31 East</i>	<i>1809 PSIG</i>
<i>Chaves County, New Mexico.</i>	

The Division Director may rescind this injection pressure increases if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

In addition to the operator name, well name and test data; please include the legal location of the well, the name of a contact person, a phone number and a return address with any future requests for pressure increase.

Sincerely,



Lori Wrotenbery  
Director

LW/MWA/kv

cc: Oil Conservation Division - Hobbs /  
Files: Case No. 1356 (Order No. R-1128), WFX-746, IPI 3rd QTR-2000



**NEW MEXICO ENERGY, MINERALS  
& NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131



***CORRECTED ADMINISTRATIVE ORDER NO. WFX-746***

***APPLICATION OF NORTHLAND OPERATING COMPANY TO EXPAND ITS  
WATERFLOOD PROJECT IN THE CAPROCK-QUEEN POOL IN CHAVES  
COUNTY, NEW MEXICO.***

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order R-1128, as amended, Northland Operating Company has made application to the Division on November 30, 1998 for permission to reinstate and expand its Drickey Queen Sand Unit Waterflood Project in the Caprock-Queen Pool in Chaves County, New Mexico.

**THE DIVISION DIRECTOR FINDS THAT:**

- (1) The application has been filed in due form.
- (2) Satisfactory information has been provided that all offset operators have been duly notified of the application.
- (3) No objection has been received within the waiting period as prescribed by Rule 701(B).
- (4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced waterflood project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

**IT IS THEREFORE ORDERED THAT:**

The applicant, Northland Operating Company, be and the same is hereby authorized to inject water into the Queen formation at approximately 3052 feet (true vertical depth) through 3 1/2-inch plastic lined tubing set in a packer located as deep as possible in the vertical section of the hole (approximately 2800 feet) in the following described wells for purposes of secondary recovery to wit:

**Drickey Queen Unit Well No.54**  
API No. 30-005-21156  
200' FSL & 330' FEL – Unit 'P'  
Injection Interval: 3052 feet – TVD  
Lateral Open Hole Completion from  
Approximately 3500 feet to 5990 feet MVD  
Packer Setting: 2800 feet  
Maximum Injection Pressure: 610 psig

**Drickey Queen Unit Well No.56**  
API No. 30-005-21153  
140' FNL & 380' FWL – Unit 'D'  
Injection Interval: 3052 feet – TVD  
Lateral Open Hole Completion from  
Approximately 3500 feet to 5990 feet MVD  
Packer Setting: 2800 feet  
Maximum Injection Pressure: 610 psig

**Drickey Queen Unit Well No.55**  
API No. 30-005-21157  
140' FSL & 330' FWL – Unit 'M'  
Injection Interval: 3052 feet – TVD  
Lateral Open Hole Completion from  
Approximately 3500 feet to 5990 feet MVD  
Packer Setting: 2800 feet  
Maximum Injection Pressure: 610 psig

**Drickey Queen Unit Well No.57**  
API No. 30-005-21154  
140' FNL & 330' FEL – Unit 'A'  
Injection Interval: 3052 feet – TVD  
Lateral Open Hole Completion from  
Approximately 3500 feet to 5990 feet MVD  
Packer Setting: 2800 feet  
Maximum Injection Pressure: 610 psig

All wells located in Section 15, Township 14 South, Range 31 East, Chaves County, New Mexico.

**IT IS FURTHER ORDERED THAT:**

Prior to commencing with drilling operations, the operator shall obtain all necessary permits for locating the wells and horizontal completions within the subject wellbores.

The operator shall 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.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no greater than .2 psi per foot of depth to the true vertical depth of the completion.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Grayburg formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify 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 tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Artesia district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

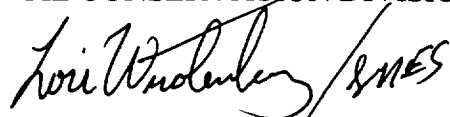
The subject wells shall be governed by all provisions of Division Order No. R-1128, as amended, and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 11th day of February, 1999.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



LORI WROTENBERY  
Director

S E A L

LW/BES/kv

cc: Oil Conservation Division - Artesia /  
Case File No.1356