



BRUCE KING  
GOVERNOR

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CABINET SECRETARY

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION



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SANTA FE, NEW MEXICO 87505  
(505) 827-7131

*ADMINISTRATIVE ORDER NO. WFX-664*

***APPLICATION OF DEVON ENERGY CORPORATION (NEVADA) TO EXPAND ITS WATERFLOOD PROJECT IN THE SHUGART-YATES-SEVEN RIVERS-QUEEN-GRAYBURG POOL IN EDDY COUNTY, NEW MEXICO***

**ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order Nos. R-3059 and R-3769, Devon Energy Corporation (Nevada) has made application to the Division on September 22, 1994 for permission to expand its East Shugart Unit Waterflood Project in the Shugart-Yates-Seven Rivers-Queen-Grayburg Pool in Eddy 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 well is eligible for conversion to injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced East Shugart Unit Waterflood Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

**IT IS THEREFORE ORDERED THAT:**

The applicant, Devon Energy Corporation (Nevada), be and the same is hereby authorized to inject water into the Queen formation at approximately 3298 feet to approximately 3871 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost

injection perforations in the following described wells shown on Exhibit "A" attached hereto, for purposes of secondary recovery .

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary, including cement squeezing perforations completed in the Yates formation in the East Shugart Well No.2 and the East Shugart Well No.33, 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 wells, 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 wells or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no more than .2 psi per foot of depth to the uppermost injection perforation.

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 Queen 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 well and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject well shall be governed by all provisions of Division Order Nos. R-3059 and R-3769, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

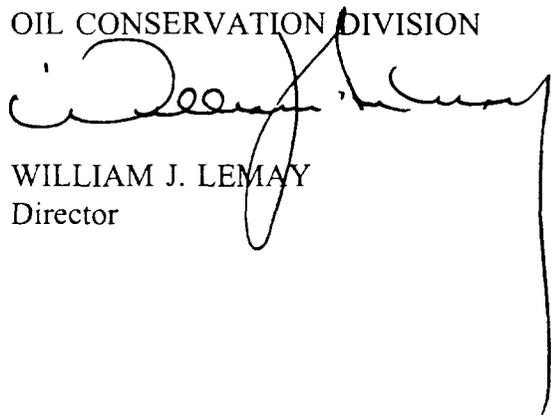
PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator

to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, 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 well, 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 4th day of November, 1994.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

cc: Oil Conservation Division - Artesia

EXHIBIT "A"  
 DIVISION ORDER NO. WFX-664  
**EAST SHUGART UNIT**  
 APPROVED INJECTION WELLS

<i>Well Name</i>	<i>Well No.</i>	<i>Location</i>	<i>Unit</i>	<i>S-T-R</i>	<i>Injection Perforations</i>	<i>Packer Depth</i>	<i>Tubing Size</i>	<i>Injection Pressure</i>
East Shugart Unit	2	990' FNL & 1650' FEL	B	34-T18S-R31E	3298'-3871'	3200'	2 3/8"	660 PSIG
East Shugart Unit	33	660' FNL & 990' FEL	A	34-T18S-R31E	3400'-3857'	3320'	2 3/8"	680 PSIG
East Shugart Unit	41	1650' FNL & 2210' FEL	G	34-T18S-R31E	3634'-3835'	3550'	2 3/8"	727 PSIG
East Shugart Unit	42	330' FNL & 1140' FEL	A	34-T18S-R31E	3641'-3812'	3550'	2 3/8"	728 PSIG

All in Eddy County, New Mexico