



NEW MEXICO ENERGY, MINERALS and  
NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON  
Governor  
Jennifer A. Salisbury  
Cabinet Secretary

Lori Wrotenbery  
Director  
Oil Conservation Division

May 26, 2000

Manzano Oil Corporation  
P.O. Box 2107  
Roswell, New Mexico 88202-2107

Attn: Mr. Donnie E. Brown

**RE: Injection Pressure Increase,  
Benson Shugart Waterflood Project,  
Eddy County, New Mexico**

Reference is made to your request dated May 25, 2000 to increase the surface injection pressure on three wells in the above referenced waterflood project. This request is based on step rate test conducted on April 27, 2000. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

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

<i>Recently Tested Well Name and Number</i>	<i>Adjacent Well Name and Number</i>	<i>ULSTR</i>	<i>Authorized Pressure</i>
Benson Shugart Waterflood Well No. 7		I-26-18S-30E	1530 PSIG
	Benson Shugart Waterflood Well No. 6	H-26-18S-30E	1530 PSIG

located in Eddy County, New Mexico.

The Division Director may rescind these 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.

Sincerely,

Lori Wrotenbery  
Director

LW/MWA/kv

cc: Oil Conservation Division - Artesia  
Files: Case No. 10686, Order No. R-9895; IPI 2<sup>nd</sup> QTR-2000



ADMINISTRATIVE ORDER NO. WFX-757

**APPLICATION OF MANZANO OIL CORPORATION 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 No. R-9895, Manzano Oil Corporation has made application to the Division on December 13, 1999 for permission to expand its Benson Shugart 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 Waterflood Project will not cause waste nor impair correlative rights.
- (6) The previously plugged and abandoned Yates & Dooley, Creek Permit Well No. 1, located 1980 feet from the North line and 1980 feet from the East line (Unit G) of Section 35, Township 18 South, Range 30 East, NMPM, Eddy County, New Mexico, is located within the one-half mile "area of review" of the proposed Benson Shugart Waterflood Unit Well No. 8.

- (7) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Manzano Oil Corporation be and the same is hereby authorized to inject water into the Penrose and Grayburg formations at approximately 3,226 feet to approximately 3,233 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 well for purposes of secondary recovery to wit:

**Benson Shugart Waterflood Unit Well No. 8**

API No. 30-015-23073

330 FNL & 990 FEL, Unit 'A'

Injection Interval: 3,226 feet to 3,233 feet

Maximum Injection Pressure: (.2 psi/ft) 645 psig

Located in Section 35, Township 18 South, Range 30 East, Eddy County, New Mexico.

IT IS FURTHER ORDERED THAT:

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 proposed Benson Shugart Waterflood Unit Well No. 8, the operator shall either provide evidence of proper cementing and plugging, or re-enter and re-plug the Yates & Dooley, Creek Permit Well No. 1, so as to confirm or establish cement across the proposed injection interval.

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 well to .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 Penrose and Grayburg formations. 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 No. R-9895 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 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 29<sup>th</sup> day of December, 1999.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



LORI WROTENBERY  
Director

S E A L

LW/MWA/kv

cc: Oil Conservation Division - Artesia  
Bureau of Land Management - Carlsbad  
Case File No. 10686 ✓



ADMINISTRATIVE ORDER NO. WFX-720

**APPLICATION OF MANZANO OIL CORPORATION TO EXPAND ITS WATERFLOOD  
PROJECT IN THE SHUGART YATES-SEVEN RIVERS-QUEEN-GRAYBURG POOL IN  
LEA COUNTY, NEW MEXICO**

ADMINISTRATIVE ORDER  
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-9895 as amended, Manzano Oil Corporation has made application to the Division on June 18, 1997 for permission to expand its Benson Shugart Waterflood Project in the Shugart Yates-Seven Rivers-Queen-Grayburg Pool in Lea 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, Manzano Oil Corporation, be and the same is hereby authorized to inject water into the Penrose and Grayburg formations at approximately 3226 feet to approximately 3554 feet through 2 3/8-inch plastic lined tubing set in a packer located within 3180 feet of the uppermost injection perforations in the following described well for purposes of secondary recovery to wit:

**Benson Shugart Unit Well No.8**  
330' FNL & 990' FEL  
Section 35, Township 18 South, Range 30 East,  
NMPM, Lea County, New Mexico  
Maximum Injection Pressure: 645 psig

IT IS FURTHER ORDERED THAT:

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 well to no greater than .2 psi per foot of depth to the uppermost injection perforations.

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 Penrose or Grayburg formations. 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 Hobbs 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 Hobbs 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-9895 as

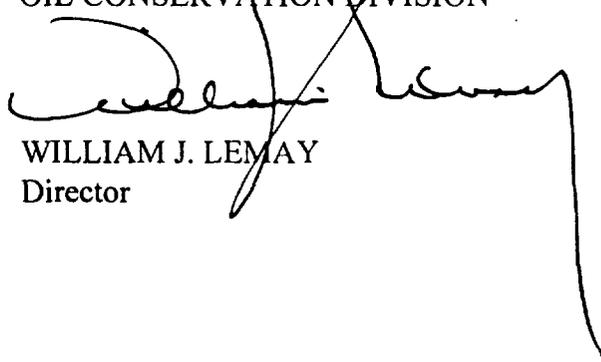
amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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 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 15th day of August, 1997.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

S E A L

WJL/BES/kv

cc: Oil Conservation Division - Hobbs  
Case File No.10686 /

**CASE 10659:** (Continued from March 4, 1993, Examiner Hearing.)

**Application of Meridian Oil Inc. for a non-standard gas proration unit, Lea County, New Mexico.** Applicant seeks approval to establish a non-standard 160-acre gas spacing and proration unit in the Undesignated Rhodes Yates-Seven Rivers Gas Pool comprising the E/2 E/2 of Section 7, Township 26 South, Range 37 East, being approximately 4 miles south of Jal, New Mexico. Said unit is to be dedicated to a well to be drilled at a standard gas well location in the NE/4 NE/4 (Unit A) of said Section 7.

**CASE 10676:** (Continued from March 4, 1993, Examiner Hearing.)

**Application of Mitchell Energy Corporation for compulsory pooling, Eddy County, New Mexico.** Applicant seeks an order pooling all mineral interests from the surface to the base of the Pennsylvanian formation underlying the following described areas in Section 35, Township 24 South, Range 29 East, and in the following manner: the N/2 forming a standard 320-acre gas spacing and proration unit for any and all formations and/or pools developed on 320-acre spacing within said vertical extent; the NW/4 forming a standard 160-acre gas spacing and proration unit for any and all formations and/or pools developed on 160-acre spacing within said vertical extent; the E/2 NW/4 forming a standard 80-acre oil spacing and proration unit for any and all formations and/or pools developed on 80-acre spacing within said vertical extent; and the SE/4 NW/4 forming a standard 40-acre oil spacing and proration unit for any and all formations and/or pools developed on 40-acre spacing within said vertical extent. Said units are to be dedicated to a single well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the costs thereof as well as actual operating costs and charges for supervision, designation of applicant as the operator of the well and a charge for risk involved in drilling said well. Said unit is located approximately 16 miles southeast of Carlsbad, New Mexico.

**CASE 10684:** **Application of SDX Resources, Inc. for approval of a waterflood project, Eddy County, New Mexico.** Applicant seeks authority to institute a waterflood project on its proposed Leonard Federal and Leonard B Federal Lease area located in portions of Section 33, Township 17 South, Range 29 East, by the injection of produced water into the Grayburg and San Andres formations through the Leonard B Federal Well No. 1 and the Leonard Federal Well No. 3, which are to be converted from producing oil wells. Said project area is located approximately 1/2 mile southeast of Bishop, New Mexico.

**CASE 10685:** **Application of Hanson Operating Company for statutory unitization, Eddy County, New Mexico.** Applicant seeks an order unitizing, for the purpose of establishing a secondary recovery project, all mineral interests in the Shugart Yates-Seven Rivers-Queen-Grayburg Pool underlying 1111.00 acres, more or less, of Federal and fee lands comprising portions of Township 18 South, Ranges 30 and 31 East, to be designated the Shugart Waterflood Unit Area. To be considered will be those matters required by the New Mexico Statutory Unitization Act, Subsection 70-7-1, et seq., N.M.S.A., 1978, and other provisions of the unit agreement and unit operating agreement. Said unit area is located approximately 8 miles south-southeast of Loco Hills, New Mexico.

**CASE 10686:** **Application of Hanson Operating Company, Inc. for approval of a waterflood project, Eddy County, New Mexico.** Applicant seeks authority to institute a waterflood project by injection of water into the Seven Rivers, Penrose and Middle Grayburg formations in its proposed Shugart Waterflood Unit Area (Division Case No. 10685) underlying portions of Sections 25 and 26, Township 18 South, Range 30 East, and Section 30, Township 18 South, Range 31 East. Said project is located approximately 8 miles south-southeast of Loco Hills, New Mexico.

**CASE 10687:** **Application of Mewbourne Oil Company for compulsory pooling, Eddy County, New Mexico.** Applicant seeks an order pooling all mineral interests from 500 feet below the top of the San Andres formation to the base of the Morrow formation underlying the following described areas in Section 17, Township 18 South, Range 28 East, and in the following manner: the E/2 forming a standard 320-acre gas spacing and proration unit for any and all formations and/or pools developed on 320-acre spacing within said vertical extent; and the SE/4 forming a standard 160-acre gas spacing and proration unit for any and all formations and/or pools developed on 160-acre spacing within said vertical extent. Said unit is to be dedicated to its Illinois Camp "17" State Well No. 2, to be drilled at a standard location within said E/2 proration unit. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is located approximately 2 miles north of Illinois Camp.

**DOCKET: EXAMINER HEARING - THURSDAY - MARCH 18, 1993**  
**8:15 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM, STATE LAND OFFICE BUILDING,**  
**SANTA FE, NEW MEXICO**

Dockets Nos. 10-93 and 11-93 are tentatively set for April 8, 1993 and April 22, 1993. Applications for hearing must be filed at least 23 days in advance of hearing date.

The following cases will be heard before Michael E. Stogner, Examiner or David R. Catanach, Alternate Examiner:

**CASE 10681:** Application of MW Petroleum Corporation for a unit agreement, Lea County, New Mexico. Applicant seeks approval of the Button Up Unit Agreement for an area comprising 960 acres, more or less, of State land in Sections 3 and 10, Township 9 South, Range 32 East, which is centered approximately 4 1/2 miles southeast of Button Mesa.

**CASE 10574:** (Continued from March 4, 1993, Examiner Hearing.)

Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Canyon formation, at approximately 8,200 feet, underlying the following described acreage in Section 14, Township 20 South, Range 24 East, and in the following described manner: the N/2 to form a single standard 320-acre spacing and proration unit for any and all formations and/or pools developed on 320-acre spacing within said vertical extent (which presently includes but is not necessarily limited to the South Dagger Draw-Upper Pennsylvanian Associated Pool); the NE/4 and NW/4 to form two standard 160-acre gas spacing and proration units for any and all formations and/or pools developed on 160-acre spacing within said vertical extent; and the NW/4 NE/4 and SW/4 NW/4 to form two standard 40-acre oil spacing and proration units for any and all formations and/or pools developed on 40-acre spacing within said vertical extent. The proposed 320-acre unit is to be dedicated to either a single well to be drilled at a standard location in Unit B or Unit E or to both wells to be simultaneously dedicated to the 320-acre unit. Further the 160-acre gas unit comprising the NE/4 and the 40-acre oil unit comprising the NW/4 NE/4 are to be dedicated to the proposed well to be drilled in Unit B. The 160-acre gas unit comprising the NW/4 and the 40-acre oil unit comprising the SW/4 NW/4 are to be dedicated to the proposed well to be drilled in Unit E. Also to be considered will be the cost of drilling and completing said well or wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as the operator of each well and a charge for risk involved in drilling said well or wells. The subject area in this matter is located approximately 7.5 miles west by south of Seven Rivers, New Mexico.

**CASE 10668:** (Continued from February 18, 1993, Examiner Hearing.)

Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant seeks an order pooling all mineral interests from the surface to the base of the Canyon formation underlying the NE/4 of Section 29, Township 19 South, Range 25 East forming a standard 160-acre spacing and proration unit for any and all formations and/or pools developed on 160-acre spacing within said vertical extent, which presently includes but is not necessarily limited to the Undesignated North Dagger Draw-Upper Pennsylvanian Pool. Said unit is to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as the operator of the well and a charge for risk involved in drilling said well. Said area is located approximately 8 miles west of Lakewood, New Mexico.

**CASE 10682:** Application of Nearburg Producing Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant seeks authorization to recomplete in the undesignated Delaware formation its Sueno 15 Well No. 1 which was drilled to the Strawn formation pursuant to Division Order No. R-9543 at an unorthodox location 2500 feet from the North line and 660 feet from the West line (Unit E) of Section 15, Township 22 South, Range 27 East. The NW/4 of said Section 15 is to be dedicated to said well forming a standard 160-acre gas spacing and proration unit. Said unit is located 1 mile east of Carlsbad, New Mexico.

**CASE 10556:** (Continued from February 18, 1993, Examiner Hearing.)

In the matter of Case 10556 being reopened pursuant to the provisions of Division Order No. R-9759, which order promulgated special pool rules and regulations for the Old Millman Ranch-Bone Spring Pool in Eddy County. Operators in said pool may appear and present evidence about the nature of the reservoir with regards to the proper classification of the pool as either oil or gas.

**CASE 10683:** Application of Meridian Oil Inc. for a non-standard proration and spacing unit, Lea County, New Mexico. Applicant seeks approval to establish a non-standard 160-acre proration and spacing unit in the Undesignated Rhodes Yates-Seven Rivers Gas Pool comprising the SE/4 SE/4 of Section 10 and the NE/4 NE/4 and S/2 NE/4 of Section 15, Township 26 South, Range 37 East, to be dedicated to its Gregory "B" Well No. 2 to be drilled at a standard location in Unit A of said Section 15. Said unit is located approximately 5 miles southeast of Jal, New Mexico.