



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

3521

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

RECEIVED

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OIL CON. DIV.

ADMINISTRATIVE ORDER NO. WFX-706

**APPLICATION OF DEVON ENERGY CORPORATION TO EXPAND ITS WATERFLOOD
PROJECT IN THE GRAYBURG JACKSON POOL IN EDDY COUNTY, NEW MEXICO**

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-3185 as amended, Devon Energy Corporation has made application to the Division on January 21, 1997 for permission to expand its Turner 'B' Grayburg-Jackson Waterflood Project in the Grayburg Jackson 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 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, Devon Energy Corporation, be and the same is hereby authorized to inject water into the Grayburg and San Andres formations at approximately 2900 feet to approximately 3750 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the wells described on Exhibit "A" attached hereto, for purposes of secondary recovery.

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 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 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 .35 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 wells that such higher pressure will not result in migration of the injected fluid from the Grayburg or San Andres 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 wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

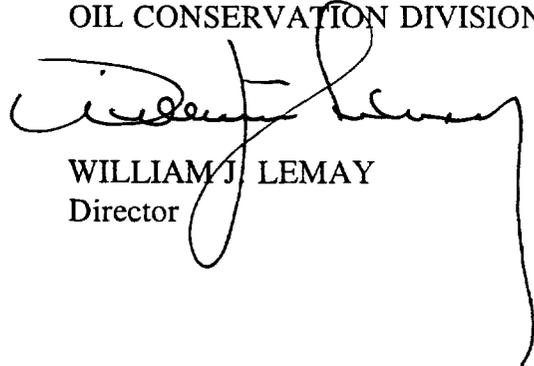
The subject wells shall be governed by all provisions of Division Order No. R-3185, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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 7th day of March, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

cc: Oil Conservation Division - Artesia
Case File No.3521 /

EXHIBIT "A"
DIVISION ORDER NO. WFX-706
JACKSON 'B' GRAVBURG-JACKSON WATERFLOOD PROJECT
APPROVED INJECTION WELLS

Well Name	Well No.	Location	Unit	S-T-R	Injection Interval	Packer Depth	Tubing Size	Injection Pressure
Turner 'B'	63	660' FSL & 1980' FEL	O	29-17S-31E	3150'-3647'	3100'	2 3/8"	1103 PSIG
Turner 'B'	71	660' FSL & 660' FWL	M	29-17S-31E	3100'-3672'	3050'	2 3/8"	1085 PSIG
Turner 'B'	76	660' FSL & 660' FEL	P	30-17S-31E	3050'-3750'	3000'	2 3/8"	1068 PSIG
Turner 'B'	107	2190' FSL & 330' FWL	L	30-17S-31E	2900'-3700'	2850'	2 3/8"	1015 PSIG
Turner 'B'	108	2190' FSL & 1700' FWL	K	30-17S-31E	2950'-3650'	2900'	2 3/8"	1033 PSIG
Turner 'B'	109	480' FSL & 330' FWL	M	30-17S-31E	2950'-3650'	2900'	2 3/8"	1033 PSIG
Turner 'B'	110	330' FSL & 1700' FWL	N	30-17S-31E	2950'-2200'	2900'	2 3/8"	1033 PSIG
Turner 'B'	111	330' FSL & 1825' FEL	O	30-17S-31E	2950'-3650'	2900'	2 3/8"	1033 PSIG
Turner 'B'	133	660' FSL & 1800' FWL	N	29-17S-31E	3100'-3700'	3050'	2 3/8"	1085 PSIG

All wells in Eddy County, New Mexico



ADMINISTRATIVE ORDER NO. WFX-711

**APPLICATION OF DEVON ENERGY CORPORATION TO EXPAND ITS WATERFLOOD
PROJECT IN THE GRAYBURG-JACKSON POOL IN EDDY COUNTY, NEW MEXICO**

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-3521 as amended, Devon Energy Corporation has made application to the Division on January 6, 1997 for permission to expand its Turner 'B' Waterflood Project in the Grayburg-Jackson 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 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, Devon Energy Corporation, be and the same is hereby authorized to inject water into the Grayburg and San Andres formations at approximately 2650 feet to approximately 3461 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, for purposes of secondary recovery to wit:

Turner 'B' Well No.2
660' FSL & 660' FWL
UL 'M', Section 17, Township 17 South, Range 31 East,
Injection Interval Approximately: 2650 feet to 3448 feet
Maximum Injection Pressure: 1325 psig

Turner 'B' Well No.4
660' FSL & 1980' FWL
UL 'N', Section 17, Township 17 South, Range 31 East,
Injection Interval Approximately: 2650 feet to 3430 feet
Maximum Injection Pressure: 1325 psig

Turner 'B' Well No.5
1980' FSL & 660' FWL
UL 'L', Section 17, Township 17 South, Range 31 East,
Injection Interval Approximately: 2700 feet to 3461 feet
Maximum Injection Pressure: 1350 psig

Turner 'B' Well No.7
660' FSL & 1980' FEL
UL 'O', Section 17, Township 17 South, Range 31 East,
Injection Interval Approximately: 2650 feet to 3447 feet
Maximum Injection Pressure: 1325 psig

All wells NMPM, 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 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 .5 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 Grayburg or San Andres 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 wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

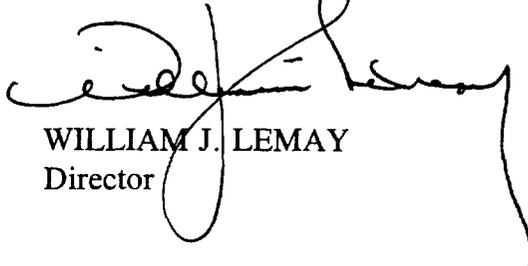
The subject wells shall be governed by all provisions of Division Order No. R-3521 as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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 22nd day of April, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

S E A L



ADMINISTRATIVE ORDER NO. WFX-712

***APPLICATION OF DEVON ENERGY CORPORATION TO EXPAND ITS WATERFLOOD
PROJECT IN THE GRAYBURG-JACKSON POOL IN EDDY COUNTY, NEW MEXICO.***

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-3185 as amended, Devon Energy Corporation has made application to the Division on December 2, 1996 for permission to expand its Turner 'B' Waterflood Project in the Grayburg-Jackson 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 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, Devon Energy Corporation, be and the same is hereby authorized to inject water into the Grayburg and San Andres formations at approximately 2700 feet to approximately 3679 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the wells shown in Exhibit 'A' for purposes of secondary recovery.

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 wells to no greater than .5 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 Grayburg or San Andres 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 wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

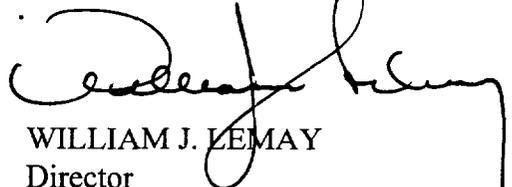
The subject wells shall be governed by all provisions of Division Order No. R-3185 as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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 20th day of May, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

SEAL

WJL/BES

cc: Oil Conservation Division - Artesia
Case File No.3521 /

EXHIBIT 'A'
 DIVISION ORDER NO. WFX-712
TURNER 'B' UNIT WATERFLOOD PROJECT
 APPROVED INJECTION WELLS

<i>Well Name</i>	<i>Well No.</i>	<i>Location</i>	<i>Unit</i>	<i>S-T-R</i>	<i>Injection Interval</i>	<i>Packer Depth</i>	<i>Tubing Size</i>	<i>Injection Pressure</i>
Turner 'B'	9	660' FNL & 660' FEL	A	20-17S-31E	2700'-3480'	2650'	2 3/8"	1350 PSIG
Turner 'B'	11	1980' FNL & 660' FEL	H	20-17S-31E	2700'-3506'	2650'	2 3/8"	1350 PSIG
Turner 'B'	30	660' FSL & 660' FEL	P	17-17S-31E	2750'-3507'	2700'	2 3/8"	1375 PSIG
Turner 'B'	51	2055' FSL & 660' FEL	I	20-17S-31E	2751'-3208'	2700'	2 3/8"	1376 PSIG
Turner 'B'	59	560' FNL & 660' FEL	A	29-17S-31E	2950'-3486'	2900'	2 3/8"	1475 PSIG
Turner 'B'	62	1980' FSL & 660' FEL	I	29-17S-31E	3100'-3679'	3050'	2 3/8"	1550 PSIG

All wells in Eddy County, New Mexico



ADMINISTRATIVE ORDER NO. WFX-717

**APPLICATION OF DEVON ENERGY CORPORATION TO EXPAND ITS WATERFLOOD
PROJECT IN THE GRAYBURG-JACKSON POOL IN EDDY COUNTY, NEW MEXICO**

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Division Order No. R-3185 as amended, Devon Energy Corporation has made application to the Division on June 13, 1997 for permission to expand its Turner 'A' Waterflood Project in the Grayburg-Jackson 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 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, Devon Energy Corporation, be and the same is hereby authorized to inject water into the Grayburg and San Andres formations at approximately 2650 feet to approximately 3475 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:

Turner 'A' Well No.14
1650' FNL & 660' FWL
Section 19, Township 17 South, Range 31 East,
NMPM, Eddy County, New Mexico
Maximum Injection Pressure: 1325 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 wells to no greater than .5 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 Grayburg or San Andres 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 wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

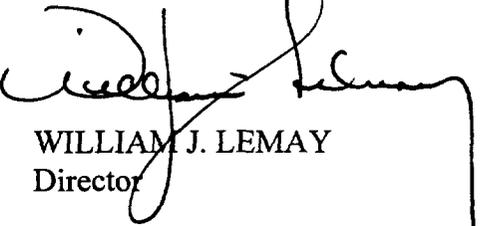
The subject wells shall be governed by all provisions of Division Order No. R-3185 as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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 21st day of July, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

WJL/BES/kv

cc: Oil Conservation Division - Artesia
Case File No.3521



ADMINISTRATIVE ORDER NO. WFX-718

**APPLICATION OF DEVON ENERGY CORPORATION TO EXPAND ITS WATERFLOOD
PROJECT IN THE GRAYBURG-JACKSON POOL IN EDDY COUNTY, NEW MEXICO**

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-3185 as amended, Devon Energy Corporation has made application to the Division on June 2, 1997 for permission to expand its Turner 'B' Waterflood Project in the Grayburg-Jackson 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 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, Devon Energy Corporation, be and the same is hereby authorized to inject water into the Grayburg and San Andres formations at approximately 3150 feet to approximately 3750 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:

Turner 'B' Well No.72
330' FSL & 1980' FWL
Section 20, Township 17 South, Range 31 East,
NMPM, Eddy County, New Mexico
Maximum Injection Pressure: 1575 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 wells to no greater than .5 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 Grayburg or San Andres 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 wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

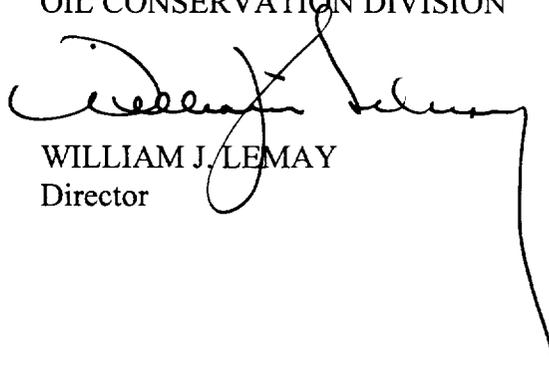
The subject wells shall be governed by all provisions of Division Order No. R-3185 as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

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 21st day of July, 1997.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

WJL/BES/kv

cc: Oil Conservation Division - Artesia
Case File No.3521