



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

ORDER NO. PMX-153

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

APPLICATION OF CONOCO INC. TO EXPAND ITS PRESSURE MAINTENANCE/ENHANCED RECOVERY PROJECT IN THE MALJAMAR GRAYBURG/SAN ANDRES POOL IN LEA COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-6157, Conoco Inc. has made application to the Division on December 15, 1988 for permission to expand its MCA Unit Pressure Maintenance/Enhanced Recovery Project in the Maljamar Grayburg/San Andres Pool in Lea County, New Mexico.

NOW, on this 13th day of January, 1989, 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 carbon dioxide injection under the terms of Rule 701.
- (5) The proposed expansion of the above referenced Pressure Maintenance/Enhanced Recovery Project will not cause waste nor impair correlative rights.
- (6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Conoco Inc., be and the same is hereby authorized to inject carbon dioxide into the Grayburg and San Andres formations at approximately 3714 feet to approximately 4090 feet through 2 3/8 inch plastic lined tubing set in a packer located approximately within 100 feet of the uppermost injection perforations in the two wells described on Exhibit "A" attached to this order for purposes of enhanced recovery to wit.

IT IS FURTHER ORDERED THAT:

The applicant is further authorized to commence injection of carbon dioxide into the Grayburg and San Andres formations through twenty-two existing injection wells (previously approved as water injection wells) shown on Exhibit "B" attached to this order.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected carbon dioxide enters only the proposed injection interval and is not permitted to escape to other formations.

Prior to commencing injection operations into the wells shown on Exhibit "A", the casing in each well shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus in each well 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 2150 psi.

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 carbon dioxide from the Grayburg and San Andres formations. Such proper showing shall consist of a test procedure 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 test 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-6157 and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained for the entry of such further order or orders as the Division may deem 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 Division Director may further require the installation of additional equipment and/or require additional testing of the subject injection wells upon determination that such equipment or testing is necessary to help control corrosion problems associated with injection of carbon dioxide.

DONE at Santa Fe, New Mexico, on this 13th day of January, 1989.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



for WILLIAM J. LEMAY
Director

S E A L

EXHIBIT "A"

DIVISION ORDER NO. PMX-153

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
MCA Unit No. 114 660 FNL & 660 FWL (Unit D) Section 28	2150 PSIG
MCA Unit No. 380 766 FNL & 1874 FEL (Unit B) Section 28	2150 PSIG

Both in Township 17 South, Range 32 East, NMPM
Lea County, New Mexico

EXHIBIT "B"

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<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
MCA Unit No. 94 660 FSL & 660 FEL (Unit P) Section 20	2150 PSIG
MCA Unit No. 109 660 FNL & 660 FWL (Unit D) Section 29	2150 PSIG
MCA Unit No. 111 660 FNL & 1980 FEL (Unit B) Section 29	2150 PSIG
MCA Unit No. 119 660 FNL & 660 FWL (Unit D) Section 27	2150 PSIG
MCA Unit No. 121 660 FNL & 1980 FEL (Unit B) Section 27	2150 PSIG
MCA Unit No. 145 1980 FNL & 660 FEL (Unit H) Section 27	2150 PSIG
MCA Unit No. 147 1980 FNL & 1980 FWL (Unit F) Section 27	2150 PSIG
MCA Unit No. 150 1980 FNL & 660 FEL (Unit H) Section 28	2150 PSIG
MCA Unit No. 152 1980 FNL & 1980 FWL (Unit F) Section 28	2150 PSIG
MCA Unit No. 154 1980 FNL & 600 FEL (Unit H) Section 29	2150 PSIG
MCA Unit No. 157 1980 FNL & 1980 FWL (Unit F) Section 29	2150 PSIG
MCA Unit No. 169 1480 FSL & 330 FWL (Unit L) Section 29	2150 PSIG
MCA Unit No. 171 1980 FSL & 1980 FEL (Unit J) Section 29	2150 PSIG
MCA Unit No. 175 1980 FSL & 660 FWL (Unit L) Section 28	2150 PSIG

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
MCA Unit No. 180 1980 FSL & 660 FWL (Unit L) Section 27	2150 PSIG
MCA Unit No. 184 1980 FSL & 1980 FEL (Unit J) Section 27	2150 PSIG
MCA Unit No. 205 660 FSL & 1980 FWL (Unit N) Section 27	2150 PSIG
MCA Unit No. 207 660 FSL & 660 FEL (Unit P) Section 28	2150 PSIG
MCA Unit No. 209 660 FSL & 1980 FWL (Unit N) Section 28	2150 PSIG
MCA Unit No. 223 660 FNL & 1980 FEL (Unit B) Section 33	2150 PSIG
MCA Unit No. 273 1980 FSL & 560 FWL (Unit L) Section 26	2150 PSIG
MCA Unit No. 301 1980 FSL & 1780 FEL (Unit J) Section 28	2150 PSIG

All in Township 17 South, Range 32 East, NMPM
Lea County, New Mexico