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

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ADMINISTRATIVE ORDER NO. WFX-598

APPLICATION OF GREENHILL PETROLEUM CORPORATION TO EXPAND ITS WATERFLOOD PROJECT IN THE WEST LOVINGTON SAN ANDRES POOL IN LEA COUNTY, NEW MEXICO

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-2071, Greenhill Petroleum Corporation has made application to the Division on July 31, 1990 for permission to expand its West Lovington Unit Waterflood Project in the West Lovington San Andres Pool in Lea County, New Mexico.

NOW, on this 10th day of September, 1990, 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 water 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, Greenhill Petroleum Corporation, be and the same is hereby authorized to inject water into the San Andres formation through the gross interval from approximately 4658 feet to 5183 feet through 2 3/8-inch or 2 7/8-inch plastic lined tubing installed in a packer located within 100 feet of the uppermost injection perforation in the wells shown 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 each 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.

Each injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on each injection well to no more than the pressure shown on Exhibit "A" attached hereto.

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 San Andres 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 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 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-2071 and Rules 701-708 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 operator shall submit monthly progress reports of the project in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

Approved at Santa Fe, New Mexico, on this 10th day of September, 1990.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

EXHIBIT "A"
DIVISION ORDER NO. WFX-598
GREENHILL PETROLEUM CORPORATION

Well Name and Number	*Footage Location*	*S-T-R*	*Injection Interval*	*Maximum Surface Injection Pressure*
West Lovington Unit No. 11	1980' FNL & 660' FEL (Unit H)	5-17S-36E	4740' - 5105'	948 PSIG
West Lovington Unit No. 12	1980' FNL & 660' FWL (Unit E)	4-17S-36E	4750' - 5095'	950 PSIG
West Lovington Unit No. 13	660' FNL & 660' FEL (Unit A)	4-17S-36E	4710' - 5183'	942 PSIG
West Lovington Unit No. 19	1980' FSL & 1980' FWL (Unit K)	5-17S-36E	4740' - 5085'	948 PSIG
West Lovington Unit No. 23	1980' FSL & 1980' FWL (Unit K)	4-17S-36E	4695' - 5150'	939 PSIG
West Lovington Unit No. 25	1980' FSL & 660' FEL (Unit I)	4-17S-36E	4730' - 5093'	946 PSIG
West Lovington Unit No. 35	660' FSL & 1980' FWL (Unit N)	4-17S-36E	4682' - 5150'	936 PSIG
West Lovington Unit No. 36	660' FSL & 1980' FEL (Unit O)	4-17S-36E	4658' - 5152'	932 PSIG
West Lovington Unit No. 37	660' FSL & 660' FEL (Unit P)	4-17S-36E	4705' - 5120'	941 PSIG
West Lovington Unit No. 40	660' FNL & 1980' FWL (Unit C)	7-17S-36E	4712' - 5144'	942 PSIG
West Lovington Unit No. 42	660' FNL & 660' FEL (Unit A)	7-17S-36E	4727' - 5160'	945 PSIG
West Lovington Unit No. 44	660' FNL & 1980' FWL (Unit C)	8-17S-36E	4730' - 5160'	946 PSIG
West Lovington Unit No. 46	660' FNL & 660' FEL (Unit A)	8-17S-36E	4730' - 5095'	946 PSIG
West Lovington Unit No. 48	660' FNL & 1980' FWL (Unit C)	9-17S-36E	4678' - 5100'	936 PSIG
West Lovington Unit No. 50	1980' FNL & 660' FWL (Unit E)	7-17S-36E	4738' - 5121'	948 PSIG
West Lovington Unit No. 61	2310' FSL & 1980' FWL (Unit K)	8-17S-36E	5020' - 5070'	1004 PSIG