Chevron U.S.A. Inc.
P. O. Box 1660, Midland, TX 79702

Production Department
Mid-Continent Division

July 5, 1984

Application for Administrative Approval
Expansion of Existing Waterflood Project
Maljamar Grayburg Unit
Lea County, New Mexico

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Gentlemen:

It is respectfully requested that administrative approval be granted to expand the existing waterflood project at the Maljamar Grayburg Unit by converting the Maljamar Grayburg Unit No. 78 to water injection. The subject well is located in Unit J, 50' FWL, 1400' FSL, Section 3, T17S, R32E in Lea County, New Mexico.

The original authorization for the Maljamar (Grayburg) water injection project was granted to Mr. Leonard Nichols by Commission Order No. 1538. Subsequent expansion of the project was approved under Order No. 2777, 3035 and R3178.

The Maljamar Grayburg Unit No. 78 was drilled and completed as an oil producer in 1981. Production has declined steadily to its current level of 2 BOPD. Conversion of the Maljamar Grayburg Unit No. 78 to injection will increase pressure in the north central section of the unit, possibly affecting previously unswept areas, thereby preventing waste. A response to water injection in the Maljamar Grayburg Unit No. 78 is expected at unit well numbers 10 and 19.

Injection at the Maljamar Grayburg Unit No. 78 will be into the Grayburg-San Andres formation over a selectively perforated interval from 3921' to 4245'. The Grayburg-San Andres formation consists of fine to very-fine grained, silty sandstones with a porosity ranging from 2 to 14%. Five Grayburg Sand zones, as well as the Premier and Lovington Sands, are present in the unit. The Lovington Sand lies approximately 120' below the top of the San Andres with the Premier Sand immediately above the top of the San Andres. Formation tops at the Maljamar Grayburg Unit No. 78 are as follows: Grayburg at 3783', San Andres at 4089'. No known fresh water aquifers are penetrated by the Maljamar Grayburg Unit No. 78.

An open injection system will be utilized with an average injection pressure of 2500 psi and a maximum injection pressure of 3000 psi. The injected water will be field produced salt water from the Grayburg formation injected at an average rate of 300 BPD with a maximum rate of 600 BPD.

The attached are in support of this application: