TITLE: GEOSCIENCE/ENGINEERING CHARACTERIZATION OF THE INTERWELL ENVIRONMENT IN CARBONATE RESERVOIRS BASED ON OUTCROP ANALOGS, PERMIAN BASIN, WEST TEXAS AND NEW MEXICO

Contract No. DE-AC22-93BC14895

Contractor Name and Address: Bureau of Economic Geology (BEG), The University of Texas at Austin, Austin, Texas 78713

Date of Report: May 29, 1997

Award Date: September 29, 1993

Anticipated Completion Date: March 31, 1997

Government Award for Current Fiscal Year: $202,600

PRINCIPAL INVESTIGATORS: F. Jerry Lucia, BEG
Charles Kerans, BEG

Project Manager: Robert E. Lemmon, Bartlesville Project Office

Reporting Period: October 1, 1996 - December 31, 1996

QUARTERLY TECHNICAL PROGRESS REPORT

for

GEOSCIENCE/ENGINEERING CHARACTERIZATION OF THE INTERWELL ENVIRONMENT IN CARBONATE RESERVOIRS BASED ON OUTCROP ANALOGS, PERMIAN BASIN, WEST TEXAS AND NEW MEXICO

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Objective

The objective of this project is to investigate styles of reservoir heterogeneity found in low permeability pelleted wackestone/packstone facies and mixed carbonate/clastic facies found in Permian Basin reservoirs by studying similar facies exposed in the Guadalupe Mountains. Specific objectives for the outcrop study include construction of a stratigraphic framework, petrophysical quantification of the framework, and testing the outcrop reservoir model for effects of reservoir heterogeneity on production performance. Specific objectives for the subsurface study parallel objectives for the outcrop study.

Summary of Technical Progress

Subsurface Activities

We continue to prepare two final reports that summarize research results of the South Cowden Field study. One report summarizes results of the petrophysical characterization research, and one summarizes results of the fluid-flow modeling research.

Outcrop Activities

We also continue to prepare the final report, which summarizes the research results of the Grayburg outcrop reservoir study.