PROJECT FACT SHEET

CONTRACT TITLE: Revitalizing Mature Oil Play Strategies for Finding and Producing Unrecovered Oil in Frio Fluvial-Deltaic Reservoirs of South Texas -- Class 1

ID NUMBER: DE-FC22-93BC14959

B & R CODE: AC1010000

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PROJECT SITE
CITY: Vicksburg Fault Zone **STATE:** TX
CITY: **STATE:**
CITY: **STATE:**

CONTRACTOR: Bureau of Economic Geology
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CONTRACT PERFORMANCE PERIOD:
10/21/1992 to 08/31/1996

PROGRAM: Field Demonstration
RESEARCH AREA: Class 1

FUNDING (1000'S)	DOE	CONTRACTOR	TOTAL
PRIOR FISCAL YRS	1,649	1,649	3,298
FISCAL YR 1996	0	0	0
FUTURE FUNDS	0	0	0
TOTAL EST'D FUNDS	1,649	1,649	3,298

OBJECTIVE: The objectives of this project are to develop interwell-scale geological facies models and assess engineering attributes of Frio fluvial-deltaic reservoirs in selected fields in order to characterize reservoir architecture, flow unit boundaries, and the controls that these characteristics exert on the location and volume of unrecovered mobile and residual oil. Technology transfer will be coordinated through producer organizations.

METRICS/PERFORMANCE:
Products developed: Development of the Geologic Advisor Software will allow more detailed, accurate, and rapid analysis of mature oil reservoirs. The computer programs take the results beyond the geological interpretation to statistical and engineering models.
Technology Transfer for this project has included 15 publications, plus presentations at 8 technical conferences.

Sept 1996

PROJECT DESCRIPTION:

Background: The Bureau of Economic Geology has focused efforts on the Frio fluvial/deltaic sandstone associated with the Vicksburg Fault Zone in South Texas; Hidalgo, Starr, Brooks, Jim Hogg, Jim Wells, Duval, Kleberg, and Nueces Counties. Seventy reservoirs out of 129 in this oil play have already been abandoned. Estimates are that 1.6 billion bbl of unrecovered mobile oil will remain unproduced unless advanced reservoir characterization techniques are applied.

Work to be performed: Advanced reservoir characterization techniques including high-frequency stratigraphic analysis, stratigraphic analysis of 3-D seismic data, and 3-D reservoir modeling are being applied to selected reservoirs in the Frio Fluvial-Deltaic Sandstone (Vicksburg Fault Zone) trend of South Texas.

PROJECT STATUS:

Current Work: Project is into Phase III, documentation of Phase II results, technology transfer, and extrapolation of specific results from reservoirs in this study to other heterogeneous fluvial-deltaic reservoirs within and beyond the Frio play in South Texas.

Scheduled Milestones:

Identify incompletely drained compartments - Rincon and T-C-B fields	03/95
Release Computer-Based "Advisor for Recompletion."	08/96

Accomplishments: Reservoirs were screened from fields within the Frio Fluvial-Deltaic Sandstone (Vicksburg Fault Zone) oil play of South Texas, and two fields were selected for detailed study: T-C-B Field, located in the northern part of the trend in Jim Wells Co., and Rincon Field, located in the south in Starr Co. Regional reservoir characterization, including statistical analysis of the remaining oil resource potential of the play, has been completed, and a Topical Report explaining statistical methodology and results has been published. Detailed characterization studies have targeted those reservoirs in T-C-B and Rincon fields that have the greatest potential for untapped compartments and new pools. A Topical Report summarizing the multidisciplinary characterization methods used, with specific examples from Rincon Field, has been accepted for publication by DOE. Results of this work were the focus of a workshop developed by the Bureau of Economic Geology and TIPRO in cooperation with GRI, DOE, the State of Texas, and PTTC and presented to operators within the play in the summer of 1995. A model has been developed that allows the prediction of reservoir architecture and heterogeneity based on position within a depositional cycle. This model was presented to representatives of eight major U.S. and foreign oil companies as part of a field trip sponsored by GRI in the summer of 1995.