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9/27/78

INFORMATIVE CALENDAR ITEM

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Thompson

33.

REVIEW OF PILOT SCALE DEMONSTRATION OF
MICELLAR-POLYMER WATERFLOODING TECHNIQUES FOR
ENHANCED OIL RECOVERY, WILMINGTON OIL FIELD,
LOS ANGELES COUNTY

The Commission, at its July, 1976 meeting, approved a request by the City of Long Beach to enter into a cost-sharing contract with the Federal Energy Research and Development Administration (now the Department of Energy), to conduct a pilot scale demonstration of micellar-polymer waterflooding techniques in the prior development portion of the Wilmington Oil Field.

Under the terms of the contract, the city and the Federal government agreed to share the total estimated project cost of \$7 million on a 50/50 basis. The total federal obligation is limited to one-half the estimated cost or 3½ million, and the Federal government does not share in any incremental oil revenue produced by the pilot demonstration. Through June 30, 1978, total project expenditures were \$3,276,000.

During the first half of 1978 all reservoir development work originally planned was completed. Six wells have been redrilled and 4 wells recompleted to provide the 4 injection and 6 production wells planned for the project. Injectivity and productivity tests have been conducted. Suitable injection rates appear to be obtainable in all 4 injectors. One recompleted production well developed mechanical problems on test and will require redrilling.

Transient, or pulse, testing has been performed with all 4 injection wells. A local supplier of the petroleum sulfonate which is used to blend with a hydrocarbon and water to form the micellar slug has been selected. The selection of this hydrocarbon is being finalized between Wilmington crude, topped Wilmington crude or a distilled fraction from Wilmington crude. Laboratory core flooding work is continuing in order to identify the most cost-effective polymer for the mobility buffer behind the micellar slug. A single-well tracer test is planned to obtain additional data regarding residual saturation in the reservoir.

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Presently, the pilot scale demonstration is about 6 months behind schedule, with micellar slug injection to start in the last quarter of this year. Evaluation of the oil recovery effectiveness should be made by the end of 1979.

The Commission's staff will continue to analyze the progress and effectiveness of this pilot scale demonstration for enhanced oil recovery, and present semi-annual progress summaries to the Commission for its information.