INFORMATIVE CALENDAR ITEM

2/78
Thompson

35.

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

The State Lands 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 have agreed to share the total estimated project cost of $7 million on a 50/50 basis. Through December 31, 1977 project expenditures are $1,174,330. The total Federal obligation is limited to $3½ million, and the Federal Government does not share in any incremental oil revenue produced by the pilot demonstration.

Presently, the micellar-polymer injection plant is sufficiently complete to conduct the mini-injection test scheduled to start in early 1978. This mini-test is designed to determine whether micellar and polymer solutions can be injected satisfactorily.

The drilling pr[illegible] to prepare the 4 injection wells and 6 production wells for the main pilot flood was started in December, 1977. In the full pilot scale demonstration a slug of approximately 75,000 barrels of micellar solution, a microemulsion of sulfonated hydrocarbon, will be injected. This will be followed by a graded polymer solution that will act as a mobility buffer between the initial micellar solution and the final phase of injected salt water.

It is economically desirable to use local Wilmington Field crude oil as the basic component of the micellar solution. Laboratory work indicates that stable sulfonates can be manufactured from Wilmington Field crude oil. However, preliminary testing of cores recovered from a newly drilled well indicates there would be a lower recovery of oil by using sulfonated Wilmington Field crude oil instead of commercial sulfonates. The search for methods to improve recovery using sulfonated Wilmington Field crude oil is continuing.

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The pilot scale demonstration is between 4 and 5 months behind the original estimates, and is currently expected to begin in mid-1978.

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.