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12/20/78
meeting.

MINUTE ITEM

12/78
Thompson

33. REVIEW OF PILOT SCALE DEMONSTRATION OF CAUSTIC WATERFLOODING TECHNIQUES FOR ENHANCED OIL RECOVERY, LONG BEACH UNIT, WILMINGTON OIL FIELD, LOS ANGELES COUNTY

During consideration of Calendar Item 33, attached, Commission-Alternate Roy Bell questioned the timing of the waterflooding demonstration as to when a point will be reached when a determination can be made concerning whether or not the project is cost effective. Mr. W. M. Thompson, Chief, Extractive Development, Long Beach Operations, replied this will be determined during the first quarter of the 1979-1980 fiscal year.

As this item was for informational purposes only, no Commission action was taken.

Attachment: Calendar Item 33 (2 pages)

A 52, 57, 68

S 27, 31

INFORMATIVE
CALENDAR ITEM

12/78
Thompson

33.

REVIEW OF PILOT SCALE DEMONSTRATION OF CAUSTIC
WATERFLOODING TECHNIQUES FOR ENHANCED OIL
RECOVERY, LONG BEACH UNIT, WILMINGTON OIL FIELD,
LOS ANGELES COUNTY

The Commission, at its September, 1976 meeting, approved a request by the City of Long Beach as Unit Operator of the Long Beach Unit, to enter into a cost-sharing contract with the United States Energy Research and Development Administration (ERDA), now the Department of Energy (DOE), to conduct a pilot scale demonstration of caustic waterflooding techniques for enhanced oil recovery from Fault Block VII in the Long Beach Unit.

Under the terms of the contract, the Long Beach Unit and the federal government agreed to share the estimated \$11.6 million cost of the demonstration on a 60/40 basis respectively, and to share similarly in any incremental oil production above that of the extrapolated conventional water flood recovery performance during the 5-year life of the project. The federal government's obligation is limited to \$4,640,000, which is 40% of the original total estimated cost of \$11,600,000. As of the end of September, 24 months into the demonstration, total expenditures were \$5,791,327. Due to an unforeseen amount of necessary well repair work and technical problems with laboratory procedures for testing core samples, the pilot demonstration costs will exceed the original estimate. The economics of this project will be reviewed at each of 3 future decision points, when it will be decided whether to continue the pilot demonstration.

It is anticipated that injection of the softened water pre-flush will commence by January, 1979, to be followed in 3 months by caustic (NaOH) water injection. This is about 18 months later than originally planned, due to the need for more extensive testing to establish the optimum concentration of caustic and also because of the unexpected additional well repair work.

Any major expansion of the caustic waterflood would require the use of produced salt water. Field testing has been completed and a report is being prepared on the economics of softening produced salt water for caustic water injection.

A 52, 57, 68

S 27, 31

-1-

CALENDAR ITEM NO. 33. (CONTD)

A computer program to forecast reservoir performance has been completed and a long range base case production forecast for the pilot area has been run. This forecast will be used as a reference in determining incremental enhanced oil recovery.

A crude oil ceiling price exemption for this project has been requested from the federal Department of Energy. The exemption would also include 2 rows of producing wells north and south of the pilot area.

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

MINUTE ITEM

12/78
Thompson

34. APPROVAL OF AGREEMENT AMONG SAN JOAQUIN OIL COMPANY,
dba SAN JOAQUIN REFINING COMPANY, WEST COAST OIL
COMPANY, AND THE CITY OF LONG BEACH, CONCERNING
PAYMENTS FOR OIL PURCHASED UNDER SELL-OFF CONTRACTS,
TRACT 1, LONG BEACH UNIT, WILMINGTON OIL FIELD,
LOS ANGELES COUNTY

Calendar Item 34, attached, was pulled prior to the meeting.

Attachment: Calendar Item 34 (1 page)

A 52, 57, 78

S 27, 31