

MINUTE ITEM

14. APPROVAL OF INJECTION INTERVAL OF INJECTION WELLS, LONG BEACH HARBOR DEPARTMENT, WILMINGTON FIELD, LOS ANGELES COUNTY - L.B.W.O. 10,158.

After consideration of Calendar Item 8 attached, and upon motion duly made and unanimously carried, the following resolution was adopted:

THE COMMISSION, PURSUANT TO THE PROVISIONS OF THE FOURTH AGREEMENT SUPPLEMENTING DRILLING AND OPERATING CONTRACT, DATED MARCH 12, 1947, PARCEL "A", APPROVES THE REQUESTS SUBMITTED BY THE BOARD OF HARBOR COMMISSIONERS OF THE CITY OF LONG BEACH FOR THE LOCATIONS OF THE INJECTION INTERVALS OF WELL FR-106 AND WELL FR-107, TO BE DRILLED AND USED FOR WATER INJECTION BY THE RICHFIELD OIL CORPORATION AT THE DIRECTION OF THE BOARD OF HARBOR COMMISSIONERS, WHICH WELLS ARE BOTTOMED AND OPENED TO INJECTION OUTSIDE OF THE AREA OF PARCEL "A" AS DEFINED IN SUBJECT CONTRACT.

Attachment

Calendar Item 8 (2 pages)

CALENDAR ITEM

8.

APPROVAL OF INJECTION INTERVAL OF INJECTION WELLS, LONG BEACH HARBOR DEPARTMENT, WILMINGTON FIELD, LOS ANGELES COUNTY - L.B.W.O. 10,158.

On March 29, 1962 (Minute Item 25, page 7862), the Commission approved the Fourth Agreement Supplementing Drilling and Operating Contract, Richfield Oil Corporation, Parcel "A", Wilmington Field, Los Angeles County, subject to the condition that the approval of the State Lands Commission shall be requested and obtained for the location of the injection interval of any well to be drilled at the direction of the Board of Harbor Commissioners for the injection of water when such well is to be bottomed in and open to injection into zones or fault blocks underlying lands outside of the geographic area of the subject lands as defined in the subject contract.

The Drilling and Operating Contract, as amended, provides in part that:

1. The contractor, at the request of the Board of Harbor Commissioners, is to drill injection wells surfaced upon Parcel "A" for the injection of water into zones or fault blocks underlying not only Parcel "A" but also into zones and fault blocks underlying other lands subject to the control of the Board in the neighborhood of the Parcel "A" lands.
2. The contractor is to operate and maintain water-injection wells surfaced outside of Parcel "A" so long as all such wells are being operated and used primarily for the benefit and development of Parcel "A" lands, and that such wells may be for the purpose of injecting water into zones and fault blocks of sub-surface intervals within or in the neighborhood of Parcel "A".

The Long Beach Harbor Department has requested Commission approval of the location of the injection intervals of a well to be deepened (Well FR-107) and of a well to be redrilled (Well FR-106). Both surface locations are on Harbor Department leased lands, with the injection intervals in the Upper and Lower Terminal Zones in underlying lands adjacent to the leased lands.

The location of the injection interval of Well FR-107 was approved by the Commission on March 29, 1962, after the well had been drilled; and upon a review of the electric log, it was found that the well had penetrated a new fault at the base of the Upper Terminal Zone, and that all of the Upper Terminal below the fault was in and up-thrown fault section. An examination of core samples showed that some of the Upper Terminal sands were oil-saturated. Because of the oil-saturated sands, FR-107 could not be completed as a water-injection well at its present bottom hole location. Therefore, it is proposed, with the approval of the Commission, to deepen the well to the bottom of the Lower Terminal Zone.

Injection Well FR-106, drilled and bottomed as an injection well within the leased area, is currently idle because of casing damage. It is requested that

CALENDAR ITEM 8. (CONTD.)

the Commission approve the redrill of Well FR-106 as an Upper and Lower Terminal Zone injection well in underlying lands adjacent to the leased lands.

The drilling of the two injection wells is necessary in order to correct the reservoir pressure imbalance on the south flank of the pool resulting from water injection from the north, which, if not corrected, will result in migration of oil from the leased area into unleased marginal lands.

IT IS RECOMMENDED THAT THE COMMISSION, PURSUANT TO THE PROVISIONS OF THE FOURTH AGREEMENT SUPPLEMENTING DRILLING AND OPERATING CONTRACT, DATED MARCH 12, 1947, PARCEL "A", APPROVE THE REQUESTS SUBMITTED BY THE BOARD OF HARBOR COMMISSIONERS OF THE CITY OF LONG BEACH FOR THE LOCATIONS OF THE INJECTION INTERVALS OF WELL FR-106 AND WELL FR-107, TO BE DRILLED AND USED FOR WATER INJECTION BY THE RICHFIELD OIL CORPORATION AT THE DIRECTION OF THE BOARD OF HARBOR COMMISSIONERS, WHICH WELLS ARE BOTTOMED AND OPENED TO INJECTION OUTSIDE OF THE AREA OF PARCEL "A" AS DEFINED IN SUBJECT CONTRACT.