21. REQUEST FOR "AMENDMENT AND MODIFICATION OF EXCHANGE OIL AND GAS LEASE 425.1 P.R.C. (SECONDARY RECOVERY)", HUNTINGTON BEACH, ORANGE COUNTY; SIGNAL OIL AND GAS COMPANY, ET AL. - W.O. 5637.

After consideration of Calendar Item 38 attached, and upon motion duly made and unanimously carried, the following resolution was adopted:

THE COMMISSION:

- 1. FURSUANT TO SECTION 6830.2 OF THE PUBLIC RESOURCES CODE, DETERMINES THAT IT IS IN THE BEST INTEREST OF THE STATE THAT THE PROPOSED AMENDATORY AGREEMENT BE ENTERED INTO; AND
- 2. ANTHORIZES THE EXECUTIVE OFFICER TO EXECUTE AND ISSUE AN "AMENDMENT AND MODIFICATION OF EXCHANGE OIL AND GAS LEASE 425.1 P.R.C. (SECONDARY RECOVERY)" IN THE FORM REFERRED TO AS EXHIBIT "2", W.O. 5637, A COPY OF WHICH IS HEREBY MADE A PART HEREOF BY REFERENCE TO THE OFFICIAL FILES OF THE COMMISSION, SUBJECT TO RATIFICATION OF THE AMENDMENT AND MODIFICATION BY ALL WORKING INTEREST OWNERS.

ALL OTHER TERMS AND CONDITIONS OF EXCHANGE OIL AND GAS LEASE 425.1 SHALL REMAIN IN FULL PORCE AND EFFECT.

Attachment Calendar Item 38 (2 pages) 38.

REQUEST FOR "AMENDMENT AND MODIFICATION OF EXCHANGE OIL AND GAS LEASE 425.1 P.R.C. (SECONDARY RECOVERY)", HUNTINGTON BEACH, ORANGE COUNTY; SIGNAL OIL AND GAS COMPANY ET AL. - W.O. 5637.

Oil and Gas Lease P.R.C. 425.1 was issued to Southwest Exploration Company on February 10, 1950, pursuant to competitive public bidding. On January 13, 1958, the State Lands Commission approved the amendment of Oil and Gas Lease P.R.C. 425.1 in order that the lessee might take advantage of the more flexible operating and development conditions specified in Chapter 104 of the Statutes of 1957. On August 18, 1964, the State Lands Commission authorized the Executive Officer to execute and issue a new lease in exchange for Lease P.R.C. 425.1 in a manner that modified the term of the lease, in accordance with the provisions of Section 6827 of the Public Resources Code. The present lessees are Signal Oil and Gas Company, Pauley Petroleum Inc., Edwin W. Pauley, John B. Elliott, John C. Elliott, Henry H. Clock, John G. Clock, Maude H. Clock, and R. A. Waestman.

On May 28, 1959 (Minute Item 17, page 4860), the Commission approved a program submitted by the Signal Oil and Cas Company, providing for a pilot water-injection program on the adjacent Lease E. 392, which was commenced on August 26, 1959. Evaluation of the resultant economic and engineering data indicated the desirability of expanding the pilot water-injection program into full-zone waterfloods, and on November 6, 1963 (Minute Item 21, page 9362), the Commission authorized the Executive Officer to execute and issue an "Amendment and Modification of Exchange Oil and Gas Lease 392.1 P.R.C. (Secondary Recovery)" that provided for the full-scale secondary recovery operation on E. 392.1. The commencement date of the full-scale flood was December 1, 1963, and as of March 1, 1965, 10,648,897 bairels of water had been injected under the full-scale operation. It is estimated that 392,175 barrels of accelerated primary production have been produced in addition to the normal primary production that was predicated would have occurred without the waterflood of 5,107,930 bayrels, indicating that the project is proving to be successful.

The existent lease requires oil royalty payments to the State based on the calculation of graduated royalty rates determined by formula from the rates of production of the wells. The required capital investment and additional operating costs for a waterflood program could not be justified by the lessee if the calculation of graduated royalty rates were also to be applicable to augmented production resulting from a waterflood program. Chapter 979, Statutes of 1961, which added Sections 6830.1, 6830.2 and 6830.3 to the Public Resources Code, authorizes lease modifications, with the approval of the Commission, for calculation of royalties on "primary" oil (i.e., that which would have been produced without a waterflood program) at the same rates that would have been applicable under the unmodified lease, and for establishment of the royalty rate for the "secondary" oil (i.e., production resulting from the waterflood operation) at not less than the minimum royalty provided by the prior lease (in this instance, 16-2/3%). Complete

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economic projections, concurred in by lessee and staff, estimate the equivalent average royalty rate on remaining "primary" production at 17.47% (if secondary recovery operations are initiated during August 1965), which rate is proposed to be established for all "secondary" production.

The engineering and economic determinations required by Section 6830.1, 6830.2, and 6830.3, Public Resources Code, have been made and incorporated in a proposed form of "Amendment and Modification of Exchange Oil and Gas Lease 425.1 P.R.C. (Secondary Recovery)" (Exhibit "2" attached). This document has been reviewed as to legality by the office of the Attorney General, who has advised by informal opinion (Exhibit "3") that the proposed amendment and modification is in compliance with the applicable statutes of the Public Resources Code, providing that the agreement is ratified by all working interest owners.

IT IS RECOMMENDED THAT THE COMMISSION:

- 1. PURSUANT TO SECTION 6830.2 OF THE PUBLIC RESOURCES CODE, DETERMINE THAT IT IS IN THE BEST INTEREST OF THE STATE THAT THE PROPOSED AMENDATORY AGREEMENT BE ENTERED INTO; AND
- 2. AUTHORIZE THE EXECUTIVE OFFICER TO EXECUTE AND ISSUE AN "AMENIMENT AND MODIFICATION OF EXCHANGE OIL AND GAS LEASE 425.1 F.R.C. (SECONDARY RECOVERY)" IN THE FORM REFERRED TO AS EXHIBIT "2", W.O. 5637, A COPY OF WHICH IS HEREBY MADE A PART HEREOF BY REFERENCE TO THE OFFICIAL FILES OF THE COMMISSION, SUBJECT TO RATIFICATION OF THE AMENDMENT AND MODIFICATION BY ALL WORKING INTEREST OWNERS.

ALL OTHER TERMS AND CONDITIONS OF EXCHANGE OIL AND GAS LEASE 425.1 SHALL REMAIN IN FULL FORCE AND EFFECT.