

and the sand surface between the Ordinary High Water Mark and the Ordinary Low Water Mark except that manholes shall be placed not in excess of one foot above the sand line and except that intake and outlet chambers shall be as permitted by the United States and no permanent surface structures shall be constructed on the foreshore except manholes which shall be marked;

- (5) That construction of facilities to be installed on the described land shall be started not later than May 1, 1954, and completed not later than December 31, 1956. On or before December 31, 1956, Lessee shall completely remove all temporary structures employed in constructing the facilities herein contemplated;
- (8) That the Lessee shall maintain and keep in good sound repair, all structures, facilities or appurtenances upon the property and that no substantial alterations to such structures shall be undertaken without the prior written permission of the State first had and obtained; nor shall construction of any structure be commenced after December 31, 1956, without obtaining such written permission;
- (10) That the Lessee shall observe and comply with all rules and regulations now promulgated by any agency of the State of California or the United States having jurisdiction therein and such reasonable rules and regulations as may hereafter be promulgated by any agency of the State of California having jurisdiction therein, including among others such rules and regulations relating to navigation on and pollution and contamination of waters of the Pacific Ocean caused or contributed to by the operations of the Lessee.

33. (SUBMARINE GEOPHYSICAL EXPLORATION OPERATIONS - W.O. 354.) Continuing applications for new submarine geophysical exploration permits and requests for extensions of the operating periods of existing permits have brought general administrative policy questions to the Commission which may be summarized as follows:

1. Why are submarine geophysical exploration permits not limited to one exploration per area instead of permitting repeated explorations?
2. Why are the results of submarine geophysical explorations not pooled and made available to any or all companies interested in the data, thereby also limiting repetitive exploration?

The following factors relating to the foregoing questions are grouped in the order of the questions:

1. (a) Individual submarine geophysical exploration projects conducted heretofore have been carried on by geophysical exploration companies under contract to competing oil companies. Therefore, it has not appeared equitable to recommend future exclusion of companies who had not participated in prior exploration operations or those who had not obtained data which were considered satisfactory for evaluation as a basis for future operations.

- (b) Seismic exploration is not an exact science and the significance of the exploration recordings must be interpreted technically. This, in many instances, requires repetition of measurements over the same area to furnish the data necessary for an interpretation or verification.
- (c) Constant advances in technology and interpretation techniques make a repetition of the exploration work an economic necessity to assure that the most complete data possible are available prior to consideration of any subsurface exploration program. Comparable up-land exploration activities have been conducted in the San Joaquin Valley since 1935, where the majority of the area has been explored by seismic techniques, with some sections having been re-explored upwards of an estimated twenty times by repeated measurements and measurements made with improved or entirely new techniques and instrumentation.
- 2.(a) Minimization of exploration operations through pooling of efforts has been practiced under many of the submarine geophysical exploration permits authorized heretofore. Two or more companies have participated in a majority of the individual submarine geophysical exploration permits, with the maximum effort in this direction having been the pooling of the operations of seventeen companies under a permit in effect in 1949. Here again, as in the case of improved exploration techniques, it has not appeared equitable to require future exclusion of companies who had not participated successfully in obtaining data required for any general or specific areas.
- (b) It has also been suggested heretofore that consideration should be given to a program wherein the State Lands Division would contract independently for geophysical exploration work, or would participate in a joint exploration program on a cost-sharing basis, whereupon all exploration data could be made available as a public record at the time of offer of an area to be leased pursuant to competitive public bidding.

These latter questions were placed in abeyance by action of the Commission (December 10, 1948, Minute Page 906-7) pending full and final determination and establishment of the extent of ownership of the coastal tide and submerged lands.

It must also be noted that the high cost of submarine seismic exploration techniques may limit the times and the areas where detailed exploration can be justified. The current operating cost for exploration by one crew is estimated at \$3,000 per day.

From past operations, it appears that specification of minima for joint operations and time limitations on repetitive exploration in a given area might be feasible.

UPON MOTION DULY MADE AND UNANIMOUSLY CARRIED, IT WAS RESOLVED AS FOLLOWS:

The Executive Officer is directed to study the matter of geophysical exploration authorizations and report recommendations at the next regular meeting as to bases for control of such permits to assure an appropriate minimum of exploration.