possibility of an increase in royalties. By analogy with the current Federal Oil and Gas Lease (Form 3120-3, September 1966), a fixed royalty should be specified, with, however, the right in the Secretary to waive or reduce royalties for yeard hardship or consequation reasons. 492

(d) This portion of the section relates to disclosure of information developed valid hardship or conservation reasons. during the research term of an oil shale lease. Under (d), the terms will provide, essentially, that the lessee shall keep the Secretary fully informed in detail of all research work and progress; that the Secretary shall have access to all facilities and books and records; and that the Secretary shall have exclusive rights to publish research information developed by the lessee.

(e) Under this portion of the section, the oil shale lease must provide that the United States will acquire title to all inventions made during the research the United States will acquire title to all inventions made during the research term of the lease. Moreover, the lessee must issue licenses, at reasonable royalty rates, with respect to such patents as he may own, unless the lease

The provisions of (d) and (e) are contrary to the competitive spirit of our form of economy, and, it is further emphasized, would act as a deterrent otherwise provides. to the commencement of an oil shale industry—the temptation would obviously be present for one to wait for somebody else to do the research work, and, for

only after that happened, to begin operations in earnest. The lessee should only be required to furnish to the Secretary, on a confidential basis, a limited amount of data to indicate the lessee's bona-fides and his prudence and efficiency in conducting research. Patents obtained by the lessee should be held and licensed by him in just the same manner as any other patents.

B. Proposed Exchange Regulations (43 CFR, Subpart 2244). Section 2244.1-7(c) (3). This portion of the regulations requires an applicant desiring to exchange his privately-owned shale lands for government shale lands must enter into an agreement specifying a time schedule, rate of investment, and a plan of operation for recovery of shale oil and other minerals from the selected tract and neighboring oil shale lands. It does not seem reasonable for the applicant to have to enter into a written agreement covering the particulars named as to his own privately-owned shale lands, as a prerequisite to the consummation of the exchange sought by him.

APPENDIX II

JANUARY 27, 1964.

Re revocation of regulations in 43 CFR Part 197—Oil shale leases.

Mr. KARL LANDSTROM,

Director, Bureau of Land Management,

MY DEAR MR. LANDSTROM: This is in reply to Secretary Udall's invitation of October 24, 1963, for comments and suggestions relating to the leasing of Federal Washington, D.C. lands for oil shale development. Pan American Petroleum Corporation's analysis of crude oil production from oil shale indicates it is a distinctly different business from the production of conventional crude oil. The capital and operating costs are high and although the risks may be lower, the profitability is accordingly lower. As a result, the leasing and royalty arrangements for the conventional petroleum industry are not directly applicable to oil shale properties. In the recommendations which follow, departures from conventional petroleum industry practice are intended to encourage development of the oil shale industry.

Pan American Petroleum Corporation recommends revocation of Executive Order 5327 and the regulations in Part 197, as well as rejection of all pending oil

1. All leases shall be awarded on the basis of the highest cash bonus offered in shale lease applications.

2. Primary lease term shall be fifteen years and as long thereafter as production is obtained, or additional operations for developing production are carried on continuously.

3. Annual lease rental should be established at \$2 an acre. 4. Royalty should be established on a sliding scale basis of 5% to 7½%; to encourage early development, the royalty should be at the rate of 5% of the value of products recovered and sold during the first ten years of the lease term, then increased 1/2% anually until the 71/2% maximum is reached.