

be clarified and if an applicant proposes a research program which is designed to develop a method for the extraction of minerals associated with the oil shale, that proposal should be given weight in considering the application.

#### *XI. Mobil Oil Corporation*

A. The proposed regulations introduce some rather radically new concepts.

Studies which the Mobil Oil Corporation has conducted has caused them to conclude that, with the increasing energy demand and with further technological developments, there is a high probability that there will be commercial production of shale oil within the next decade.

##### B. Specific Comments:

1. Since the oil shale deposits are rather well defined both as to existence and probable quality, we strongly support the concept of competitive leasing.

2. Generally, the procedures which have been used in the leasing of offshore lands appear to us to be an effective and practical method of handling nominations and bidding for leases. We should like to suggest, however, that sales should not be held too often and that nominations be limited in some manner.

3. We believe that any lease should cover an area up to 5,120 acres. This would provide a compact block to be worked for oil shale production which we believe would be the minimum size and the configuration for optimum development in the light of presently known technology.

4. We should like to see the elimination of lease provisions constituting a plan of development. At this time and in the light of present technology, definitive plans of development are difficult to determine. Furthermore, it would impose a significant burden on those charged with the responsibility for making an award of a lease on competitive bids, and would cause continuing review of the status of lessee's compliance with the plan of development. We should like to recommend that in lieu of plan of development provisions in the lease form, the lease be for a term of ten years and as long thereafter as shale oil is being produced therefrom.

Coincident with our recommendation of a lease term, we should like to suggest that the Mineral Leasing Act allow inclusion of leases into units which are subject to plans for development. Any lease so committed to a unit would be extended beyond its term while the unit remains in existence (requiring compliance with the plan of development). Under this type of procedure, the Secretary would have the discretion of approving any such unit and the plan of development thereon, the lessee having to commit to undertake such plan of development. This procedure would allow the lessee to determine whether to commit to a plan of development at a time when the commencement of development is contemplated and could be definitely fixed.

5. We would recommend \$2.00 per acre per year as the rental or minimum royalty requirements.

6. It is exceedingly difficult at this time to determine the proper royalty rate, particularly in the light of the effect on presently uncertain economics of oil shale production. We feel that a royalty of 5% for the first twenty years of production with provision for adjustment of such rate by the Secretary of the Interior upwards to 10% thereafter would be a reasonable royalty. We have some concern how properly to fix the point of application of the royalty and determination of market value for the purpose of calculating any such royalty.

7. The lease should include appropriate clauses such as, "force majeure", "right of surrender", no termination for temporary cessation of production and generally similar clauses to those found in present oil and gas lease forms.

#### *XII. Pan American Petroleum Corporation*

A. In their view, the approach taken by the current proposals will neither serve the national interest nor the private interest concerned with initiating an oil shale industry with venture capital.

The general approach discerned in the proposed regulations is an outgrowth of a fundamental misconception concerning the nature of oil shale operations. This misconception involves the belief that, without the imposition of severe restrictions by the Interior Department, tremendous profits, garnered almost risk-free, would come to private industry from the exploitation of Federal oil shale lands. This attitude is reflected throughout the proposed regulations (e.g. the royalty provisions of Section 3172.5, the stated concern for preventing "windfall profits", Section 3170.0-1, and the requirement that the oil shale lessee disclose to the