

(5) A case has been made, by some members of the Board, for leasing public lands "in commercial size leases" of otherwise unspecified size to oil companies, including those that now are holding extensive private lands, on terms that would encourage them to do research and development on shale oil production. The leases would be conditional on spending specified sums for such research and development in the field of shale oil production. Any such course of action must be rejected. It would be inconsistent with wise conservation practice and gravely damaging to the public interest. Specifically:

The cost of development is unknown.

The cost of production is unknown.

The recoverable value of oil in the land offered for lease is imperfectly known.

Given these unknowns the government would be offering a subsidy of unknown value for a development of unknown cost promising a return of unknown amount. This amounts to dispersing public property while wearing multiple blindfolds. It would be justified, if at all, only by the absence of orderly procedures or the need for greatest haste. Neither justification exists.

Genuine research effort is impossible to measure. The company that put on a show of research cost and effort and waited for a research breakthrough that it could imitate might well profit equally with a firm that did serious work.

While competition has virtue in many spheres, it is not the normal recourse for research on major new technologies. In the case of nuclear development, space development, military development or water desalinization, the established practice is to contract with one or a small number of firms for a defined task.

The foregoing view is supported, at least partially, by the oil industry. One company, in its presentation to the Oil Shale Advisory Board, noted that intelligent leasing would first require further research and development work and that to issue leases contingent on development would be impractical.

Those supporting this proposal speak of Research and Development leases—R & D leases—as though they were a commonplace practice. In fact, the Department of the Interior assures us that it has no precedent for the grant of a lease to encourage "research and development on underdeveloped industrial processes" and that it has never issued such a lease.

Leases seriously contingent on development would be possible only for large firms with significant research establishments. Smaller independents would be excluded.

As noted, no one has defined a commercial size lease. In the absence of such definition, and having in mind the large quantities of oil underlying very small acreages, extremely large quantities of oil could be alienated in the course of leasing seemingly very modest areas of land. We do not assert that this is the purpose of the "commercial-sized" lease, but plainly it could be the result.

The main body of the report rightly speaks of the need for protecting landscape, preventing pollution and conserving water. But what is required here will depend on the recovery process employed. This will vary greatly with the process employed. It will be totally different for retort and *in situ* recovery. The proper conservation practices cannot be specified if it is not known what practices will be required.

The leasing of very small tracts for Research and Development is merely the use of a smaller amount of public property as a subsidy to development. And again what is "small" remains unspecified. (One one-hundredth of the request of Shell or Sinclair would still be a great deal of oil.) In informal conversation it has been suggested that a small lease might be not more than forty acres. This would not involve serious alienation of public resource. But it is difficult to say that it would be any incentive especially to companies which now own, in fee simple, many times this area. We reluctantly conclude that the small R & D lease came into the conversation only when the "commercial-size" lease could no longer be defended and on the theory that to alienate a little public property for an unknown result is better than to alienate a lot for an unknown result.

We conclude, accordingly, that the R & D leasing would result only in transfer of lease rights to private owners and there is no certainty or strong likelihood that it would lead to development. It would thus be disappointing to local communities and the region. Their interest, we believe, is in far more secure and certain development procedures that are unclouded by the danger that land will be alienated, in accordance with the primary present interest of producers, and not developed.