

against royalties during the first 10 years of the lease to encourage higher bids and early development.

(3) That the election of production or research be that of the lessee since some companies already have acquired shale oil production technology.

I would say, Mr. Chairman, that is the point where I depart most from the intent of the Secretary's regulation. His regulation quite obviously is to encourage research and development, but nowhere in the regulation is it mentioned that he intends to encourage production. As I indicated earlier, it is only by initiating production that we can depend on the supply of oil in any emergency. I also commented that the Government should not attempt to own or control the technology thereby removing the competitive force created by the better mouse-trap philosophy.

(5) That research by the lessee be allowed the same confidential status as exploration for oil, gas, and other minerals on public lands with appropriate Government agencies having access to information needed for efficient administration of the lease.

(6) That the method of applying royalty under these initial leases conform to conventional practice, leaving to the Public Land Law Review Commission and the Congress the responsibility for changes in concept; further, that the royalty burden be moderate so as not to discourage the heavy investment of capital that is needed.

(7) Finally, we recommended, as discussed earlier in this statement, a policy of encouragement rather than restriction, since oil shale, though large in potential, is still a low grade mineral that will require the greatest ingenuity technologically to create from it any wealth whatsoever. We also urged that private enterprise, not only in words but in fact, be assigned primary responsibility for oil shale development and that wherever possible competition be demanded in all endeavors associated with the establishment of the industry.

One point that I want to discuss in addition to the leasing regulation, and that is conservation, a problem that is of concern to the Secretary, to members of this committee, to the industry, and to the public—conservation, pollution, alteration of the environment, prevention of waste, et cetera.

We all know, especially those of us who live in Colorado, Utah, and Wyoming, that we can tolerate no conditions in an oil shale industry such as have been created in the past by the indifference to damage to the surroundings by some mining and milling operations. At the same time, we must recognize that any large industry will change the ecology.

We should not fear this because, since little industry exists in the areas involved, we have an opportunity to build a model industrial community. Nor should we fear mining as such. As long as we extract minerals from the ground and treat them for the recovery of valuable components, the digging of ores and the disposal of solid, liquid, and gaseous wastes will be with us.

There are methods now, and others are being developed, to prevent the problems that have seemed to be an inseparable part of heavy industry, mining in particular. It is in this area that federally supported research and State and Federal regulations should be channeled.