

rentals in the range of \$250,000 to \$500,000 per year. Higher rentals could be bid and would be a factor in evaluating bids. Amounts actually expended on research and development of the leased properties or their commercial exploitation would be credited against rentals. After production has been achieved, rentals would be credited against royalty payments. Applicants would be limited to a total of about 5,000 acres maximum, or lesser acreage containing not more than about 1 billion barrels of economic reserves—25 gallons per ton or higher.

2. Recognition be given to those companies who have expended substantial sums in the past on the development of oil shale mining and processing techniques by permitting them to credit at least 50 percent of such expenditures during the past 20 years against their rental obligations.

3. If, at the end of the initial term, commercial production is underway on a particular block, the lease as to that block would remain in effect so long as such commercial production continues. Absent commercial production, the lessee would have the option to extend the lease term for not to exceed two periods of 5 years each, at an escalating rental subject to the same credits as those permitted for the initial term; in other words, again, to provide dollars to conduct research.

I might add at this point that I would be entirely opposed to a bonus per se because I think the objective of the Department of the Interior is to get the shale off the ground.

The way to get shale oil off the ground is to get the maximum number of people, corporations, entities of all sorts, conducting research and development, and I would like to see every dollar spent go into research and development, not to the U.S. Treasury for various other purposes that you gentlemen sometimes approve.

Union believes these procedures would (1) stimulate the lessee to achieve commercial production as soon as possible, (2) discourage speculation and speculators, and (3) assure return of acreage to the Government within a reasonable period if commercial production or substantial efforts therefor were not achieved within a reasonable time.

May I add, if a man fails to conduct his research work and does not pay this \$250,000 to \$500,000 a year out in research, and he has no program to do so, then I would propose that the terms of the lease would be such that he would forfeit his rights and the land would return to the Government to be put into the hands of other more serious-minded people who want to do something about oil shale.

Assuming each applicant could show adequate financial resources, awards should be based upon the size of the rentals offered which, while offered in terms of cash, could also be reasonably regarded as work commitments. While recognition would also be given to those who have spent their time and money on oil shale research and development during the past 20 years, the conditions proposed would prevent undue advantage.

As to qualification of applicants, the Department's proposed regulations are permeated with discrimination against those companies which either having existing oil shale acreage or other oil resources. For