

than 30 percent of net income, and would trend in the direction of 50 percent, but would never reach that point.

A great deal of interest has been expressed in this royalty system, and in the actual bracket rates which were proposed, and what we proposed 4 months ago was simply our best thinking at that point. Some of the comments which we received addressed themselves to the impact of the system on anticipated operations. These views will be considered carefully in our study. I want to emphasize, however, that the system was developed for the special needs of our research and development program only. It was our hope that the outcome of the program itself would provide the information needed to design a royalty system, a permanent royalty system, for competitive leasing, when such leasing becomes appropriate.

Another difficult aspect of the regulations involves the problems of multiple mineral development. This is another item I should like to underscore for the committee. The shales in the center of the Piceance Basin contain substantial quantities of dawsonite, a sodium-aluminum compound finely disseminated in the shale rock. Nahcolite, a sodium compound, is also present, and it is always possible that other minerals will be found. We expect, through the research and development program, to learn a great deal about the technology and economics of operating in this mineral complex, with a view to developing processes to recover economically substantially all the marketable minerals within the shale. In other words, if we went just to a straight competitive bidding approach on this, are we in a position where we can require the recovery in the national interest of all of the values that are present or have a party holding the lease simply go ahead and recover the oil and leave the other values there. It is possible, however, that some techniques may be proposed which would result in the recovery of some minerals but not others. Thus, while we would encourage the maximum recovery of all the minerals, we would also consider proposals which would concentrate on only some of them, because it is premature to render a final judgment that a particular deposit should be worked only if all the minerals can be extracted, or that any or several minerals should be preferred over others. We do not know. Our experts do not know at least at this point.

Another matter of special concern relates to inventions resulting from the program. We have announced our intention to follow the President's patent policy which provides that in the case of Government-sponsored research for the general public welfare, the rights to inventions should vest in the United States, so that they may be used by all without royalties. This, of course, is good for industry generally in terms of the competitive situation. It is also good for the consuming public. It must be remembered that the entire effort was aimed at creating techniques so that when the shale lands are made available they would be made available in a meaningful sense—the techniques developed for exploiting the shale would not be monopolized by the few who had obtained research leases in the beginning. Any policy whereby the Government made such a large resource available to a few for research purposes without providing that the benefits of the research go to the public, would not be a research and development policy at all, but simply a land disposal program. If we believed that