

a needed supplement to the crude-oil resources of this country, it must somehow find its place in tomorrow's national economy. If an oil shale industry is allowed to start now, it can mature without wasteful subsidy. There is a lead time of 5 to 10 years necessary to bring this resource efficiently and economically into national use. Because a crash program would be ineffective and inefficient, we must have the foresight to start this process now rather than wait to see it be born out of economic or military chaos.

For the past three years, the Colorado School of Mines Research Foundation has acted as the lessor of the Anvil Points oil shale research facility near Rifle, Colorado. A thorough research program in the extraction of oil from oil shale has been going on there as an extension of the technology developed by the U.S. Bureau of Mines in earlier years. Six major oil companies—Mobil, Humble, Pan American, Phillips, Continental, and Sinclair—have participated in and provided the financial support of this research. To date there has been an expenditure of \$7 million. The interest of these companies in advancing oil shale technology is real, and the research effort is a major one. I am sure that this effort was in good faith, looking forward to when land would be made available for commercial development of oil shale as an energy resource. This work is continuing toward that objective.

The Federal government owns approximately 72 percent of the total land layered with oil shale. The richest and thickest beds lie beneath these lands; thus, perhaps 85 percent of the total resource is government controlled. In the Piceance Basin of Colorado are many unpatented oil shale mining claims dating back before 1920. There are also patented claims around the periphery of the basin and some patented land along stream valleys within the basin. Additional mining claims since 1920 and leasing since 1930 of oil shale have been withheld by the Federal government.

During the past three years much has been said about oil shale in special advisory group meetings, in technical symposia, and in the committee rooms of Congress. In considering the birth of an oil shale industry, the discussions usually involve one basic question. Will the land be made available for development by private enterprise, or will this resource be developed by government agencies? May I submit to you that if such a question had been posed a hundred years ago, and if the decision had been in favor of government development, the growth of mineral resources in the national economy would have been quite different, and, I believe, far below the level of economic growth this Nation has experienced. Ours has been a heritage of private capital; significantly, the emergence of mineral-resource wealth in this Nation has carried our people to the highest living standard in the history of mankind.

The debate of private versus governmental development has brought forth many warnings of "the danger of giveaways" and "the danger of the recurrence of Teapot Dome type scandals." These cries of doom, from those who believe that only government research and development can serve all the interest of all the people, have done much to slow the policy decisions needed so badly in recent years. At this critical time, it is inappropriate to fan the fires of emotion and fear and in so doing endanger the long-range values of resource development as a base to our national economy.

Enforced inactivity since 1920 is clearly a disservice to the Nation and in itself scandalous. Mr. Byron Mock, a fellow member of the Oil Shale Advisory Board, has pointed out to me that the "Teapot Dome was not a scandal so much because of the chosen instrument that was selected. It turned out to be an excellent business deal from the government's point of view. The scandal arose from the personal benefits sought and accepted by a government official behind closed doors. An open competitive system could prevent that . . . The inactivity of government since the 1920 Mineral Leasing Act may in itself be considered a scandal. The failure to secure rentals has deprived the government of large amounts of rental revenues. The failure to issue leases even in the period from 1920 to 1930 prevented the development of proper adversary proceedings to eliminate mining claims or perfect them under any of the methods available, including, as provided in the law, a substitution of a lease for an unpatented mining claim, or claims. Today this substitution would be impossible."

For years the Secretary has heard the warning cry of pending scandal if any action were taken. He has been advised that there is no need for anything but continuing research. In January, 1967, the Secretary of Interior announced a five-point program of departmental action on oil shale matters. His resolve to