

IV. Having provided advice on the foregoing, four problems will remain to be resolved by the Secretary of the Interior, and the Board may wish to offer its advice on one or more. These problems—essentially residual of the broader policy considerations that the Board will deal with in I through III above, are:

- A. What specific programs should be followed to stimulate advances in oil shale technology?
 1. Intramural research
 2. Contract research
 3. Privately financed research
 - a) incentives
- B. What should be the mechanics of private access to the public lands?
 1. Competitive leasing
 2. Noncompetitive leasing
 3. Concession arrangements
 - a) Based on area?
 - b) Based on volume of oil?
- C. What means should the Government use to influence rate and mode of development?
 1. Taxation
 2. Subsidies
 3. Production limitations
 4. Federal participation in earnings
- D. For what purpose should Federal revenues arising from oil shale development be used?
 1. States
 2. Reclamation or other special funds
 3. General receipts

(Mineral Leasing Act of 1920 stipulates 37.5% to States, 52.5% to Reclamation Fund, 10% to general receipts. Some states earmark their shares for special purposes.)

In the beginning two premises had been casually accepted and they operated as an impediment to the initial approach. Those premises were: First, that opening of the federal oil shale reserves could ruin the petroleum industry of the United States, and second, that the oil shale reserves within the United States were so completely controlled by the federal government that there could be no oil shale industry until the federal reserves were opened. By the time of the Rifle meeting in September of 1964, the second of these had been largely repudiated. Discussions of the reserves in Utah and Wyoming showed that there were substantial areas where the Federal Government did not control. This was clear in Utah and implied as to Wyoming. The presence of patented claims in an interspersed fashion was revealed in Utah as well as the presence of state owned school sections in the oil shale area.

Despite this, the presentations by the Department of the Interior personnel continued to be largely focused on the Piceance Basin with particular reference to the heartland of the vast oil shale reserves lying at depth. This heartland as I recall was not fully identified in the early 1950s when the Bureau of Land Management was considering an active program for opening the oil shale lands. Surrounding this heartland is an area of controverted oil shale claims which the federal government has, over the years by one means or another, attempted to invalidate. They are still in controversy. The next ring away from the heartland consists of patented properties lying at lesser depth with less thickness. Running through the heartland and both of the rings are areas of patented oil shale lands where the outcroppings have been revealed and where the parties had proceeded to patent in years past. Even the emphasis on the Piceance Basin heartland did not fail to reveal that the interspersed private holdings could still proceed without waiting for the lifting of the federal withdrawal order which prevented issuances of leases on federally owned resources.

Interestingly enough the result of the revelation that the federal government did not dominate the oil shale industry by withholding its reserves and, therefore, could not dictate the nature of the development completely was to cause an attack on private owners of oil shale lands for not having gone forward with development. The implication was that it made no difference whether the federal government opened the public lands and, therefore, we had no urgency in proceeding. This line of argument increased in force up to the final draft of the