report. At least in my opinion, the presentation that was made in late November an dearly December when representatives of the private economy appeared before us, completely answered this argument. The fear that a governmentoperated oil shale industry might come into being after private industry had gotten started in the less rich lands was a ghost that kept appearing. The other element was that private capital having been spent in the development and showing the way might give latecomers a chance to pick up federal leases and compete without having the vast initial investments that appear to be necessary. The other factor which was apparent as we saw the pattern of land ownership was that control of segments of federal land is essential to creating an economic block of state and fee lands in practically all areas.

The first premise as to the threat to a domestic petroleum industry was rebutted not only by the testimony of the representatives of the private segment of our economy but also by the facts that were continually presented to us by the Department of the Interior. Those facts revealed that the cost of extracting kerogen from shale was far greater than the cost of extracting petroleum from a well. The initial investments are greater and for a unforeseeable period the margins of profits would be quite low, if they existed at all. The ability to compete against petroleum, domestic or foreign, is of substantial doubt. The need to make vast expenditures in the development of techniques as well as in the development of the plant facilities indicated that only by some sort of consenting could small constant because active that only by some sort of consortium could small operators hope to become active

in an oil shale industry. This caused some concern.

The interesting result of all the discussions was that on one hand we were being told that the resource was of such tremendous value that no one should be allowed to reap the rich harvest of profits from proceeding; while on the other hand we were told that there was no market for the product and that no one could presently or foreseeably treat the oil shale as a valuable mineral deposit for purposes of discovery under the mining laws. One of the men appearing before us, reppresenting what is probably the major producer of petroleum in the United States, stated emphatically that he felt the oil shale would eventually find its place in the energy complex, that it would be phased in and take its position but that it would not be destructive of the petroleum industry. In reply to a question as to why he felt his company should be "subsidized" by having all or part of the vast oil shale reserves "alienated" to it, he replied, "You may call that a subsidy; I certainly do not." One of the Board members later commented that it was the first time he had heard competitive bidding proposed for subsidies.

The developing of the issues ran into one major problem. The members of the Board, with certain minor exceptions, were men of such tremendous intellectual power that they were able to tackle and resolve problems rapidly. There was no false modesty about ability, but to me, as a bystander, that tremendous intellectual ability tended to carry us past certain common facts that might have justified further exploration. There is always a tendency for intelligence to abhor a vacuum. If no immediate explanation of a phenomenon is present, one is found. The need for broad factual information is particularly important in such an atmosphere. The stress of time, the urgency to complete, the desire to serve, all mitigated against the exhaustive treatment that each would have preferred.

At the Rifle discussion two additional issues were emphasized; they had been present before. The first was the problem of the legal interpretations in determining whether unpatented oil shale claims were valid. The Board was not unaware of comments throughout the country that the United States had repudiated the word of its employees over the years by issuing a 1964 opinion which placed a new interpretation on certain past actions of the Department. The Board was asked whether they agreed with the Departmental procedure in these matters. The problem was thoroughly discussed and the conclusion was that the Board was not in a position to pass on the legal arguments and should not involve itself therein. The Board felt it was desirable to make an affirmative statement that the legal aspects of the mining claim problem were not investigated and that we felt it would be presumptuous for us to do so when the matter was one for the normal administrative tribunals and courts to consider. On that basis there was no further discussion of the mining claim legal problems and none

²⁹ See note 27 supra.