Proposed Section 3172.2(b) also states that the Secretary will extend the term of the lease to permit commercial production if certain requirements are met. Tests for meeting these requirements with respect to "optimum recovery of minerals" and air and water pollution are not spelled out. We recommend that these provisions be made somewhat more specific before any leases are granted. Otherwise, non-uniform application of limits, variations of limits, or designation of new criteria after the development phase is completed could cause complete loss of expenditures for development. We will discuss pollution specifically later

Another requirement by Section 3172.2(b) is that a lease is extended for proin this presentation. duction only if the Secretary determines that the research activities of the lessee were substantially in accordance with the research plan submitted or a modification approved by the Secretary. Part of such plan must be based on estimates. This presents the question of whether the required estimates submitted in good faith, can result in failure to obtain a commercial lease if the estimates were materially different from the final facts. What if the research disclosed a better avenue of development that was not in the plan? Would pursuit of this avenue to a profitable process prevent extension to a commercial production term?

Finally, all of the discussion of leasing in the proposed regulations is based on the assumption that commercial operations must be preceded by research and development. There should be some provision for straight commercial leasing without a research term. As we recommend in discussion of royalties, selection of these lessees should be by competitive bidding.

## LEASE LIMITS

Section 3172.3(a) of the proposed regulations places limitation on the acreage of any lease (5120 acres). There are indications that lease grants will be considerably smaller in extent. Then Section 3172.3(d) becomes critical. It provides that no one "may take, hold, own or control an interest in more than the total maximum acreage of land included in any lease hereunder, \* \* \* " This section might be construed as meaning that if a company owns 1% or any small undivided interest in a shale lease from the government, it is disqualified from owning other leases or interests in other leases. This provision does not specifically relate these ownership limits to federally leased land or even to oil shale lands. This might be construed as meaning that fee ownership of shale land could disqualify applicants for federal shale land. The provision should be clarified and state that a "net" interest of more than 5,120 acres in federal oil shale leases will not be allowed, or that a "net" interest of more than a specified number of barrels of reserves in federally owned oil shale of specified minimum richness will not be allowed. We recommend that only zones thicker than 25 feet and averaging more than 30 gallons per ton be counted as reserves but that there be some weighing factors to allow for greater thickness of less rich material.

The statute (30 U.S.C.A. sec. 241) says that not more than one lease will be granted to any one person, association or corporation. Thus, if a company took a research lease which was later reduced in the discretion of the Secretary to a small number of acres for the commercial term, such company might thereafter forever be precluded from obtaining another lease. Even if the Department of Interior changes the proposed regulations to clarify its intent, this does not necessarily mean the judiciary will construe the statute in accordance with the

intent and understanding of the Department of Interior. We believe that the acreage or reserves limitation should be placed on a state by state basis. This would push development of processes for less rich reserves and foster competition in states other than Colorado. Further, dereserves and loster competition in states other than Colorado. Further, depleted acreage or reserves should be removed from the chargeable acreage or reserves status. This change would, of course, require changes in existing legislation. A statute based more along the lines of 43CFR 3120.1–2, conlegislation. A statute based more along the lines of 43CFR 3120.1–2, conlegislation oil and gas leases would seem preferable. However, we do not feel cerning oil and gas leases would seem preferable acreage or reserves should be delayed pending new legislation.

## POLLUTION AND CONSERVATION

The oil industry is conscious of the need to minimize pollution of air and water to keep our land clean and livable. Our company is making extensive efforts to improve control of pollution in every operation and will apply the same effort in planning shale oil projects. We feel, however, that neither