A major omission from the proposed rules is that they make no provision for a company, or group of companies, which develops the technology outside the framework of the proposed rules to obtain commercial oil shale leases. It should not be necessary for a company or group which successfully completes research and development to go through a two-stage leasing program.

A second weakness of the proposed rules is the provision for publication under 3172.9(d). "We are certain the Department's intent is to make information on any research breakthroughs available to the public as rapidly as possible."

The most objectionable feature of the proposed rules is the provision which gives the Government, in the absence of exceptional circumstances title to all inventions. The Geonuclear Corporation suggests that patent ownership reside in those who make the inventions with a royalty-free license to the Government and licensing at reasonable royalties to third parties.

## VIII. Gulf Oil Corporation—June 14, 1967

Insofar as shale oil production is concerned, the regulations proposed by the Secretary of the Interior and released on May 7, 1967, do not, provide the proper basis on which to conduct the research necessary to make efficient, economic development possible. Comments on the proposed regulations are as follows:

1. Oil shale lands, by definition, include minerals which are components of the rock but exclude mineral deposits which can, in the opinion of the Secretary of the Interior, be mined without damaging the oil shale beds. We feel many legal and operational problems are inherent in an attempt to isolate a deposit of minerals interbedded in the shale oil.

2. There appears to be no real assurance that, after spending up to 10 years on research, the term of the lease will be extended to allow the oper-

ator to proceed with development.

3. Under the proposed regulations, no operator is allowed more than a total of 5,120 acres. This has the effect of encouraging a large number of relatively small operations and hence makes economies of scale very difficult.

4. The proposed regulations suggest a sliding scale royalty based on the percentage which taxable income bears to investment. Neither royalty nor depletion are allowed when computing taxable income. This departure from convention places royalty more in the category of an additional tax than a royalty payment.

5. The provisions in the proposed regulations concerning disclosure of information and title for patents are particularly onerous. Making all data and patents available for public use destroys any advantage an operator may

The Gulf Oil Corporation believes that development of a resource such as shale oil by the mining and retort method, will be difficult to justify economically under the best of circumstances. In their opinion the regulations proposed by the Department of the Interior do not provide the incentive necessary to attract private industry into conducting the research and making the tremendous investment re-

quired for development.

## IX. Humble Oil Refining Company-June 8, 1967

A. The Secretary is to be commended for taking the initial step which could result in the development of the federally owned oil shale reserves. However, Humble believes that the proposed regulations do not provide adequate incentive for private industry to commit its technical and capital resources to the development of such reserves. Humble is particularly concerned that the proposed regulations embrace certain principles that would inhibit the normal working of the free enterprise system in the development of this natural resource.

Development of shale oil production should be controlled by normal economic forces governing competition among fuels. The free interplay of empetitive pressures among domestic energy sources continues to be the best means of supplying

the needs of the public at the lowest cost.

Bidding for leases should be open to all potential participants on a competitive basis, with no discrimination in respect to firms in any particular industry, size category, or other classification. Unitization of lands into conservation or pro-

duction units should be permitted. The holding of leases for speculation should be discouraged by requiring the expending of appropriate sums for research and development during each year of the lease until commercial production has been achieved. Any failure to carry out diligently the agreed upon program should be grounds, subject to court review, for forfeiture and cancellation of the lease as provided for in the regulation.