HUMBLE OIL & REFINING CO., Houston, Tex., October 26, 1967.

Hon. HENRY M. JACKSON, Chairman, Committee on Interior and Insular Affairs, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: In response to your suggestion made during the oil shale hearings held by your Committee on September 14, I would like to submit this letter as a supplemental statement for the record. You indicated that such a

During the question and answer period following my testimony, I was asked to explain why we feel that a royalty rate of 5 percent should be applied to shale oil production from public domain lands as opposed to the 16% percent royalty that is applied to oil and gas production no Federal submerged lands on the Outer Continental Shelf. As you recall, our position was that a royalty rate of up to 5 percent should be imposed which is more traditional for the types of extractive industries that are more comparable to the oil shale industry. These include phosphate, sodium and potash, which also come under the Minerals Leasing Act. Fundamentally, the oil shale and offshore oil and gas operations Leasing Act. rundamentary, the on shale and outshore on and gas operations are completely different. In the case of offshore operations, high risk factors exist in locating and proving the presence and productivity of the minerals sought. However, once the presence of the mineral is proven, the state of the art for production is well-advanced and the unit cost to produce a barrel of oil or a thousand cubic feet of gas is relatively nominal compared with the product value and is predictable with a fair amount of certainty. Conversely, in the case of shale oil, the mineral has already been located thereby necessitating a very minimal amount of exploratory activities. On the other hand, in the case of oil shale, a high unit cost is required to produce a barrel of oil because of the complex production operations that require mining, crushing, retorting, upgrading and disposal of large amounts of waste material. In addition to the very complex production operations involved, the state of the art for producing oil from shale is an embryonic stage, and the costs are difficult to predict. Hence, the great risks that are associated with producing oil from shale are related to the production operations and are not greatly influenced by exploration activities.

The less favorable unit of production costs for shale oil and the technological uncertainties, as opposed to offshore or other conventional production, present a major barrier to the development of an economically viable synthetic oil industry. The technological risks and high operating costs for shale oil coupled with a burdensome royalty rate, will place it at a distinct competitive disadvantage which will seriously reduce the commercial attractiveness of shale oil and therefore postpone needed research and development efforts and investment.

During the colloquy on royalty rates, one of the Committee members expressed an interest in royalty rates for other hard rock minerals in the public domain lands. We have surveyed these royalty rates and compiled them in the tabulation attached hereto entitled "Comparative Royalty Rates". The minerals listed in the schedule are all those leasable under the Mineral Leasing Act of 1920 as amended. All other minerals produced from Federal lands such as copper, uranium, zinc, lead, iron, stone, sand, gravel, and many others, are subject to location under the mining laws of the United States, and are produced free of

During the question and answer period, an inquiry was also made as to Humble's position on the need for a Federal recordation statute such as S. 1651 which was introduced at the request of the Department of the Interior. This bill, if enacted into law, would require a declaration of interest to be filed with the Secretary of the Interior with respect to all mining claims on public domain lands. At present, all mining claims are required by state laws to be recorded in the appropriate county records. Since these county records are available to the public, we do not believe that the enactment of legislation such as S 1651 is necessary for prompt determination of questions of validity of existing oil shale mining claims by the Department. This bill would, of course, centralize the recordings and eliminate the necessity for examination of individual county records to obtain information as to mining claims. Insofar as the bill applies to oil shale, we would not oppose its enactment, particularly, if the Secretary feels that it would expedite the prompt determination of the validity of the many Sincerely yours,