A 10-year program is proposed herein, at a total cost of \$101 million. At the earliest practicable date, after decisions are made to determine the basis upon which the public oil-shale interests should be exploited, appropriate Federal research activities should make an orderly withdrawal from this field in favor of private enterprise, and resume a baseline research- and resource-devel-Director, Bureau of Mines. opment program.

W. T. PECORA, Director, Geological Survey. BOYD L. RASMUSSEN,

Director, Bureau of Land Management.

The program is designed to provide, over the next 10 years, information that will lead to the development of the latent oil-shale resource as a means of increasing the domestic energy and minerals supply, to contribute to the economic

The Green River oil-shale deposits of Colorado, Utah, and Wyoming are to a major extent a publicly owned resource of great magnitude. The equivalent of growth and well-being of the Nation. several hundred years supply of petroleum at present consumption rates exists in these beds on lands owned by the people of the United States. America's economic growth and security in this age is in large part determined by our ability to meet the petroleum needs of our industrial and military machines ability to meet the petroleum needs of our industrial and military machines. An adequate supply of gasoline, jet and diesel fuel, and other liquid and gaseous fuel products can be made available within our borders by development of these

National economic growth is gained by using our natural wealth wisely, so there is good reason to seek the development of effective processes for producing oil and minerals from shale. Inasmuch as the major portion of the richest oilresources. shale reserve is on public land, our Government has deep public responsibilities to enlarge the knowledge about the resource and, in cooperation with appropriate private interests, to stimulate development through research and experimenta-

There is much evidence of strong interest in oil shale by private industry, and tion in the mining and processing of oil shale. there is widespread belief that technologic advance will bring production costs within competitive range of petroleum within the next 10 years. Six companies have joined with the Colorado School of Mines Research Foundation to conduct research at the Bureau of Mines facility at Anvil Points, Colorado. These and other companies are also undertaking other technologic research; also, the Federal Government is continuing research on oil-shale technology.

Within the United States oil shales occur in at least 29 states. Based on potential oil yield, the best oil shale occurs in the Green River formation in Colorado, Utah, and Wyoming, where in the thickest portions a continuous 2,000 foot section will yield an average of 25 gallons of shale oil per ton of shale. other domestic oil shales may be considered to be of secondary importance, as they commonly yield less than 15 gallons of oil a ton and occur in thicknesses less than 25 feet. Even though these shales may not be of immediate interest as potential oil sources, there are possibilities of their development as gas sources. Many of the western oil-shale lands also contain oil and natural gas, minerals,

Many of the western our-snale lands also contain our and natural gas, initialis, and ground water. Water—essential for shale oil refining, for the communities that would support the oil-shale industry, and for many other existing or pothat would support the oil-shale industry, and for many other existing or pothat would support the oil-shale industry. that would support the off-shale maustry, and for many other existing or potential enterprises—is not in abundant supply, and must be used wisely. The land surface itself—through agriculture, grazing, wildlife, and recreation—is land surface itself—through agriculture, and processing oil shale must aim also of considerable value. Plans for mining and processing oil shale must aim