

# SCIENCE

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## PETROLEUM, PAST, PRESENT AND FUTURE<sup>1</sup>

By Dr. PER K. FROLICH

ESSO LABORATORIES, STANDARD OIL DEVELOPMENT COMPANY, ELIZABETH, N. J.

*Synopsis:* This paper reviews the recent remarkable progress in the petroleum field. Our growing dependence on the products of the oil industry has resulted in considerable concern regarding the ability to supply our future needs for liquid hydrocarbons. The proved reserves of crude oil correspond to some fifteen years' consumption at the prewar rate. However, the excessive wartime requirements for petroleum have led to such a high rate of withdrawal from these underground reservoirs that we may not be able to keep up with the demand for long. In addition to the proved reserves of petroleum known to be present in the earth, large but as yet undiscovered petroleum resources may be expected to exist in various parts of

the world. How long we can continue to find this oil and bring it to the surface at the desired rate is a question, but it is certain that eventually a shortage in natural petroleum will occur. When that time comes, it should be possible to supply our needs for gasoline and other hydrocarbon products from such alternate sources as natural gas, shale oil and coal. It is concluded that there need be no sudden change as far as the supply and consumption of gasoline and other petroleum derivatives are concerned. Future developments in this field will probably be characterized by further technological progress, increased drilling for oil on a world-wide basis, necessary adjustments in supply and demand, and a gradual shift to synthetically produced hydrocarbons.

<sup>1</sup> Presented before the general meeting at the 106th meeting of the American Chemical Society, Pittsburgh, Pa., and printed in the November issue of *Industrial and Engineering Chemistry*. Unless stated otherwise, the charts shown are based on data from the Bureau of Mines and other Government agencies, "Petroleum Facts and Figures" (1941 and previous editions), and on petroleum industry figures.

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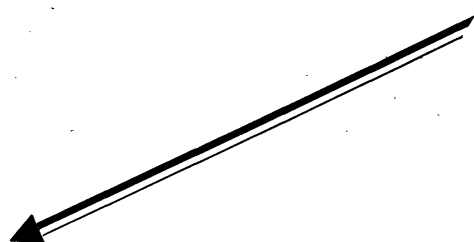
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