

## Impact of Atomic Energy

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## Current Economic Outlook in Petroleum Industry

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## Geological Research Developments

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Research activities yielding information applicable to petroleum geology are at an all-time high. They are being conducted at an accelerated pace in many parts of the world and in all the major fields of geology, as well as in a number of related sciences including chemistry, physics, biology, and oceanography. Routine research, which utilizes accepted techniques and applies established concepts, forms the hard core of these activities and focuses attention on broadscope problems. The solution of such problems requires fundamental or basic research directed toward formulation of working principles and the improvement of established techniques or development of new methods.

Support given fundamental research concerned with processes and facies in modern depositional environments and with geochemical methods of isotope dating indicates that these activities are having great impact on petroleum geologists. Of widespread interest also are micropaleontological investigations designed to improve age dating and stratigraphic correlations; studies of pelagic foraminifers, protista, and acid-insoluble microfossils, including hystrichosphaerids, spores, and pollen are currently being pursued. The origin, migration, and accumulation of oil, and the definition of source rocks are topics which have been receiving industry's support for many years. Increasing emphasis is being placed on hydrodynamics of oil accumulation and on factors controlling various geologic structures. Techniques for portraying geologic data on maps, for interpreting airphotos, and for analyzing sediments and determining sedimentary rock properties are being developed or improved, including research in petrophysics, petrofabrics, remnant magnetism, clay mineralogy, and diagenesis. All research is being built on a background of information that has been accumulating for many years. Although progress can be reported in all areas, no sudden break-through is anticipated.

The A.A.P.G. plays a significant role as a catalyst in the over-all research effort. Through research committees, industry's needs are surveyed, projects are outlined, and pertinent research in progress is evaluated and recommended for support. Bulletins of the Association, journals of affiliated organizations, and publications of regional and local societies make results of research widely available. Petroleum geologists thus play a prominent part in developing knowledge which is a principal goal of all geologic research.

## Origin of Oil

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The origin of oil has fascinated geologists and chemists alike for a great many years. The relative complexity of crude oil as a substance and its fluid and migratory nature all add to the difficulty of obtaining indisputable answers as to how it was formed.

The history of scientific inquiry on the origin of oil began with a period of limited observation and unlimited speculation extending into the 1920s. Between 1926 and 1952 the API sponsored Projects 6 and 43, which added greatly to the fundamental knowledge about natural organic compounds and provided some clues as to how petroleum might have formed.

During the past decade great progress has been made, largely due to advances in chemical and instrumental methods of analysis. As a result, we now know certain im-