Gulf Research & Development Company

THE Gulf Research & Development Company, a wholly owned subsidiary of the Gulf Oil Corporation, is situated near Harmarville, Pennsylvania, on a tract overlooking the Allegheny River, 15 miles northeast of downtown Pittsburgh. Of its 1280 employees, approximately 450 are scientists and engineers, 365 are technicians, and 465 nontechnical or service personnel. In addition, the research organization directs and coordinates the activities of nearly 900 people engaged in geophysical exploration in the United States, Canada, Europe, Africa, and South America.

Practically all the research activities of the parent corporation are carried on in the laboratories of Gulf Research. In concentrating research and development on all phases of petroleum technology, from exploration to refining and product development, Gulf Oil has adopted a course unique among large integrated oil companies. Other companies have customarily located their exploration and production laboratories in major oil-producing areas, and their process and product research near principal refineries. Today, with crude oil production a worldwide operation, and communication and transportation at high stages of advancement, Gulf feels that there is no disadvantage in locating its combined research facilities near Pittsburgh, the headquarters of the company. Indeed, there is a distinct advantage in bringing together at one place the ideas, experience, and training of technical people with backgrounds in all branches of science, engineering, and petroleum technology.

The research organization consists of eleven major divisions, with ten of them engaged in research and development work, and the eleventh responsible for the business and nontechnical service functions of the laboratory. Among the technical divisions is one involving a fellowship at the Mellon Institute of Industrial Research, engaged in fundamental research.

The ten research divisions are concerned with geophysical methods and instrumentation; petroleum geology; well-drilling equipment and techniques; oil reservoir engineering; corrosion, metallurgy, and materials testing; crude oil evaluation; refinery technology; chemical manufacturing processes; economic studies on chemical and refinery processes; development of analytical and testing procedures; automotive, marine, aircraft, and diesel engine research; and the development of petroleum fuels and lubricants.

One division, responsible for all geophysical exploration in the field, equips and directs 50 field parties scattered throughout the world. Field data gathered by these parties are analyzed at the laboratory and lead to recommendations for leasing land and drilling wells. Gulf was not only a pioneer in geophysics and reservoir engineering, but was the first of the oil companies to recognize the importance of applied physics in solving technical problems of the industry.

The Gulf Laboratory, established at its present site in 1935, now has 19 buildings for research and development, and again as many auxiliary or service buildings. Testing and analytical equipment is of the latest design and includes all types of spectrographs, two mass spectrometers, and an electron microscope. Constant-temperature rooms ranging from $-30°$ F to $+130°$ F are available, with some large enough to accommodate full-scale test engines. Two road-test chassis dynamometers make it unnecessary to drive test cars on public highways under adverse weather and traffic conditions. A large, well-equipped machine shop builds special research equipment and makes most of the complex instruments used in geophysical field operations. Six expert glassblowers, equipped with the most modern glassblowing tools, fabricate the intricate glass apparatus used in research. Excellent technical information service is furnished with the aid of a 15,000-volume library.

The problem of guiding and coordinating the research program could be a difficult one, but this has been accomplished effectively through advisory committees made up of representatives of the research organization and of the operating divisions.

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SCIENCE, founded in 1880, is published each Friday by the American Association for the Advancement of Science at the Business Press, 10 McGovern Ave., Lancaster, Pa. Entered as second-class matter at the Post Office at Lancaster, Pa., January 13, 1948, under the Act of March 3, 1879. Acceptance for mailing at the special rate postage provided for in the Act of February 28, 1925, embodied in Paragraph (d-2) Section 34.40 P. L. & R. of 1948.

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Annual subscriptions, $7.50; single copies, $.25; foreign postage, outside the Pan-American Union, $1.00; Canadian postage, $.50. Special rates to members of the AAAS.

The AAAS also publishes THE SCIENTIFIC MONTHLY. Subscription and advertising rates on request.

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