

Oil Companies Suppress German Synfuels Formula, Says Hollywood

"*The Formula* is centered around the proven fact that a vital part of the formula for the manufacture of synthetic fuel disappeared at the end of World War II and, in spite of the energy crisis in the world today, still remains hidden."

So claims the publicity agent for a film starring George C. Scott and Marlon Brando which is due to be released for the Christmas season. The theme of the thriller is that the oil companies have suppressed the Germans' magic formula and are biding their time until the Saudi oil fields run dry, whereupon the companies will produce synfuels from the many coal fields they have bought up.

What perhaps separates the film from others of its genre is M-G-M's publicity technique of dressing up fiction as fact. *The Formula* is based on a novel of the same name by Steven Shagan. Shagan, says a press release prepared by M-G-M's agent, Rogers and Cowan, "believes he knows what oil company (or companies) have the real formula and are holding it off the market until at least 1990." Mobil, the same release quotes Shagan as saying, "could do it now. They have the formula, have had it since World War II."

Figuring doubtless that the movie-going public will readily swallow so succulent a conspiracy thesis, M-G-M and author Shagan have done disappointingly little to prop up their limp masquerade. Asked what the magic formula is, Shagan, who claims to have spent 2 years researching German wartime sources, lapses into a strangely unimaginative vagueness. "When I saw the formula, it was probably 6000 different equations," he told *Science*. What is the composition of the miraculous catalyst? Shagan thinks it may have included platinum and iridium. To the suggestion that the Bergius and Fischer-Tropsch syntheses used by the Germans are more in the nature of textbook processes than Mobil secrets, Shagan replies lamely, "I don't think they are holding back a formula, I think they are holding back the mass production of synthetic fuels."

The historical facts about the German synfuels effort bear a purely accidental resemblance to those in *The Formula*. American oil companies, far from learning some priceless secret from the German synfuels industry, helped construct it. As late as 1939, Standard Oil of Indiana built a synfuels plant for aviation fuel in Germany. Standard Oil and the German company I. G. Farben shared many patents on synfuel processes through a jointly owned company.

By 1944 Germany had 15 synfuels plants in production, most of them using the process developed by Friedrich Bergius in 1921. Depending heavily on slave labor, the synfuels plants attained peak production, of 340,000 metric tons a month, in March 1944.* Thereafter Allied bombing raids rapidly reduced output to a relative trickle.

After the war, Germany's victors were interested in all aspects of her industry. Cartloads of documents relating to the manufacture of rockets, cameras, sewing machines,

*Arnold Krammer, "Fueling the Third Reich," *Technology and Culture* 19, 394 (July 1978).



Marlon Brando as oil magnate

even harmonicas, found their way to the United States. Synfuels were not entirely neglected. Some 175 tons of documents about the German synfuels industry were retrieved by a 150-man team, the Technical Oil Mission, which visited all the synfuels plants, save those in the Russian-occupied zone, and some research laboratories.

The mission, headed by Wilbur C. Schroeder, now professor of chemical engineering at the University of Maryland, wrote some 400 to 500 publicly available reports on German synfuels processes. Was there any sign that the Germans had some secret formula that they didn't wish to divulge? "I didn't have any reason then to think anyone was holding anything back, and I don't have any reason now," says Schroeder.

The German synfuels processes were highly uneconomical. With the discovery of cheap and copious oil in the Middle East in the 1950's, industrial interest in synfuels technology dropped to nothing, and has revived only in recent years.

Copies of the captured synfuels documents are being submitted to a detailed historical review at the Center for Energy and Mineral Resources of Texas A & M University. Co-director of the study is Arnold Krammer, a scholar of German history. "I don't see any conspiracy at all—the formulas were well known," says Krammer. The results of his researches are published regularly in the *Fossil Energy Update* bulletin issued from the Oak Ridge National Laboratory. Krammer has turned up nothing to hint at the existence of a secret formula. "We are finding interesting material, but I don't know how interesting it is to industry. The oil companies went through a part of the information in 1946 or 1947; we find their footprints on some of the documents," Krammer notes.

After the war, the Bureau of Mines built a German-style synfuels plant, using the Bergius process, in the town of Louisiana, Missouri. It was completed in 1949 but had to be rebuilt in order to make technical improvements. "I guess we did as well as the Germans did," Schroeder reflects.

The Formula may or may not be a good thriller. As history it is bunkum.—NICHOLAS WADE