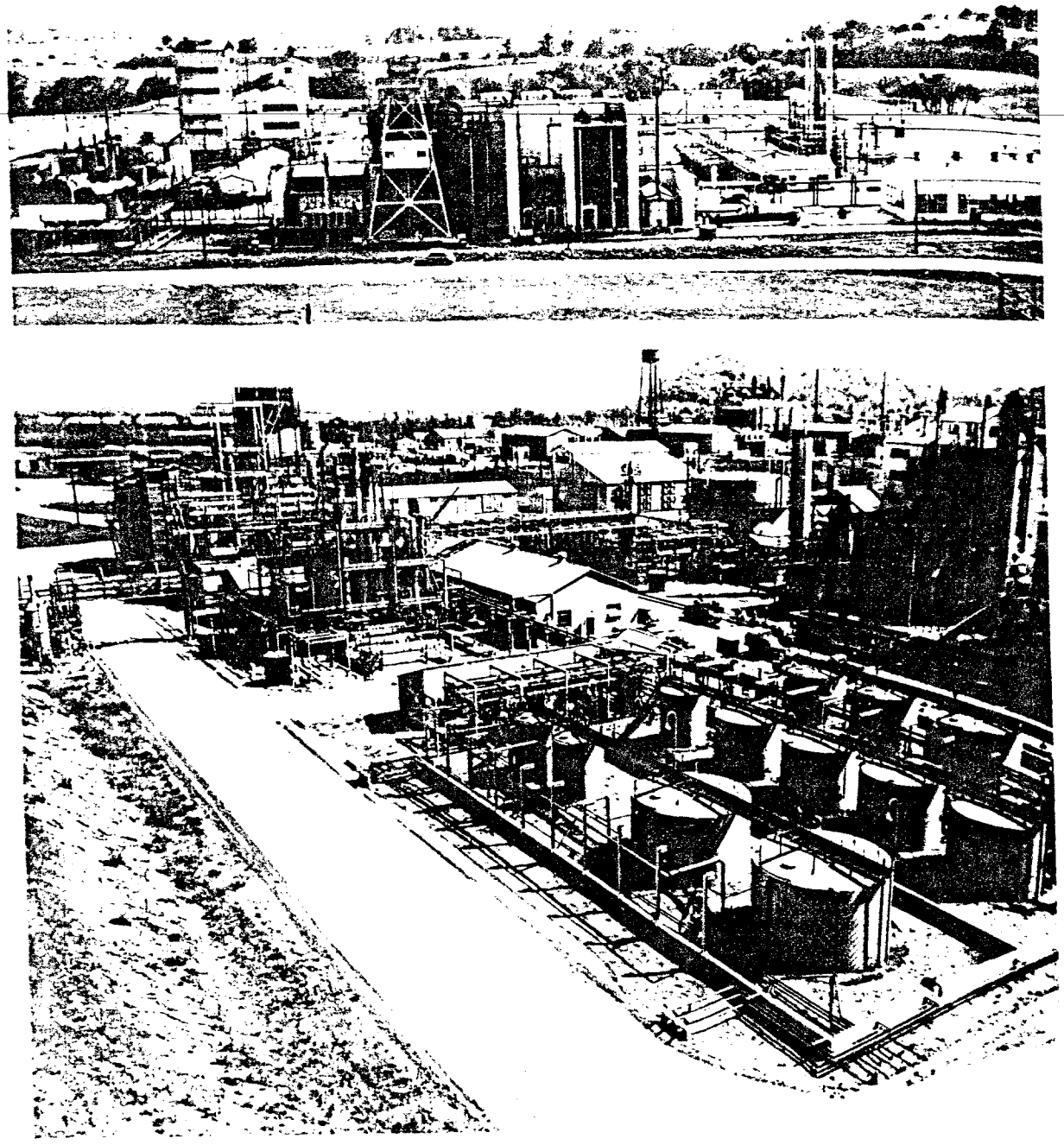

FIGURE 2. - Bureau of Mines Synthetic Liquid Fuels Demonstration Plants at Louisiana, Mo. Upper view, coal-hydrogenation plant; lower view, Fischer-Tropsch plant.

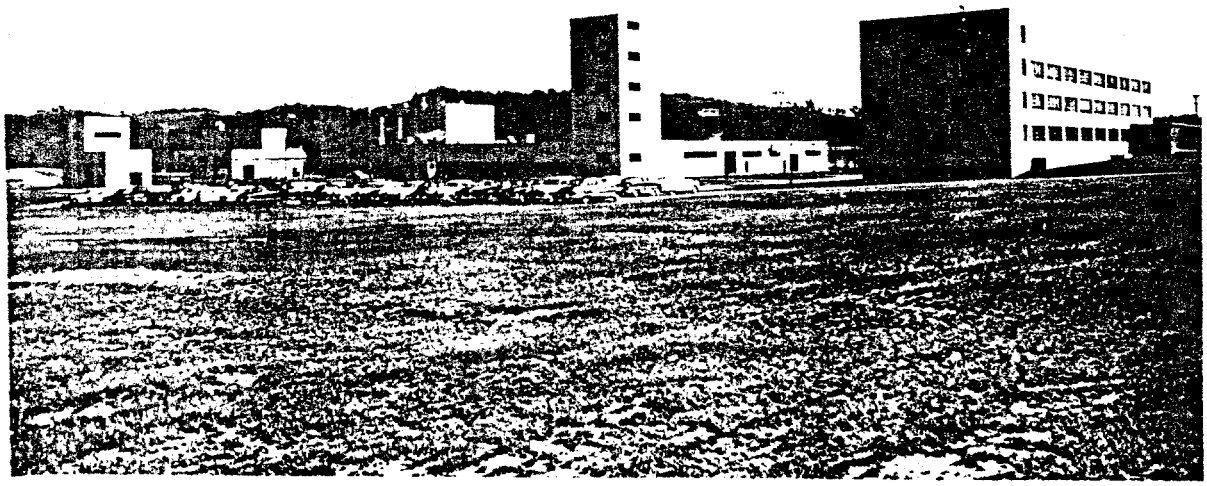

FIGURE 3. - Appalachian Experiment Station at Morgantown, W. Va.

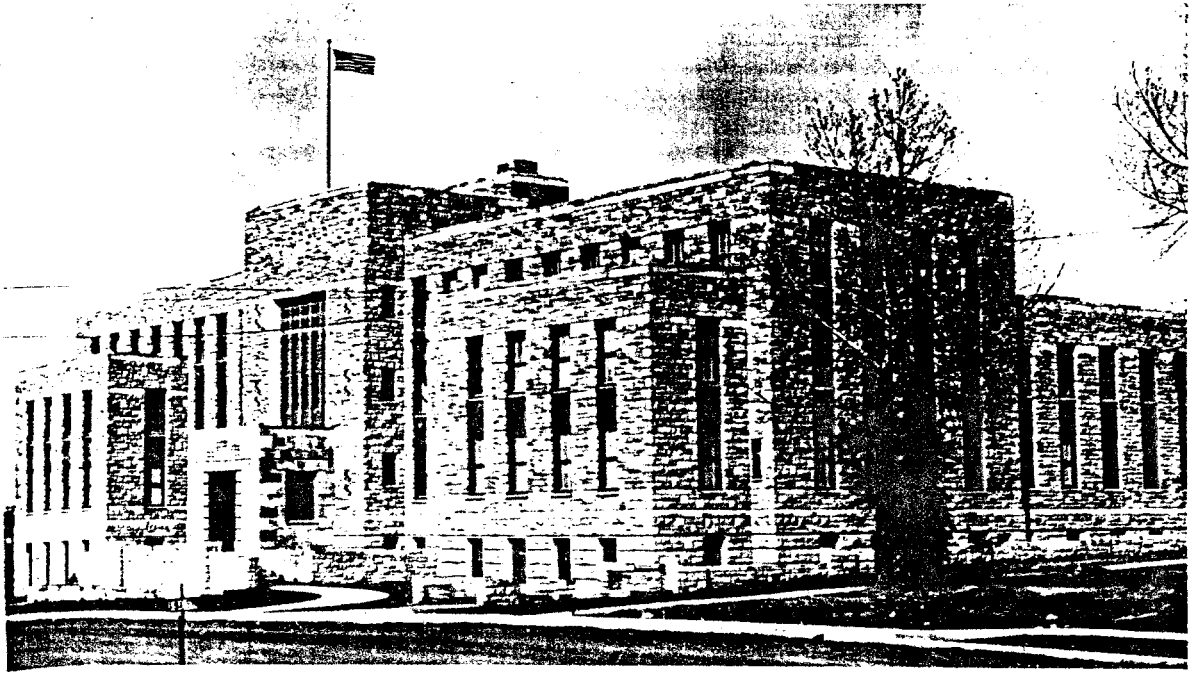

FIGURE 4. - Petroleum and Oil-Shale Experiment Station, Laramie, Wyo.

Agricultural-Residues Research

Department of Agriculture Northern Regional Research Laboratory, Peoria, Ill. - Work by the Department of Agriculture on producing synthetic fuels from agricultural residues was supported by synthetic liquid fuels funds from 1944 through 1950. A demonstration plant was constructed during 1945-46. Operations from 1946 to June 1950 were concerned primarily with producing fuels from corncobs.

As already reviewed in a final summary (7), processes were developed for (a) hydrolyzing pentosan residues to pentose sugars and fermenting these to butanol, acetone, and ethanol; and (b) converting cellulosic residue of cobs to dextrose and then to ethanol. Studies were made also of the value of these products as additives to motor fuel.

Petroleum Secondary Recovery and Refining Research

Research on secondary recovery from stripper oilfields and on oil-refining processes was amplified by synthetic liquid fuels funds made available from July 1948 to June 30, 1950. Thereafter this work was again financed solely from other appropriations.

Secondary recovery research was carried out at the Petroleum Experiment Station, Bartlesville, Okla.; the Petroleum and Oil-Shale Experiment Station, Laramie, Wyo.; the Petroleum Field Offices at San Francisco., Dallas, Tex., and Franklin, Pa.; and the Wichita Falls, Tex., and Bradford, Pa., Suboffices. Refining studies were conducted at Laramie, Wyo., and Bartlesville, Okla.

Continuing Synthetic Liquid Fuels Research

The special funds and authorizations furnished by the Synthetic Liquid Fuels Act aided in rapid accumulation of information on the technology and feasibility of producing synthetic liquid fuels from American oil shale and coal, by the large-scale work in the demonstration plants. By 1955, however, the data obtained had emphasized the need for much additional intensive laboratory and small-pilot-plant-scale studies, adequately authorized by the organic act of the Bureau of Mines (10). Accordingly, further extension of the special act was not requested. Research on the production of synthetic liquid fuels is continuing in the Bureau's coal and oil-shale laboratories as a part of their regular research and development programs.

Information obtained in such continuing studies will be summarized hereafter in reports of progress in these fields. The work on coal will be presented in the Bureau of Mines annual reports on research and technologic work on coal and related investigations (see for example, the 1955 report, 8). More detailed and specialized papers concerning particular phases of research will be issued as separate Bureau of Mines publications or published in scientific and technical journals, as in the past.

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