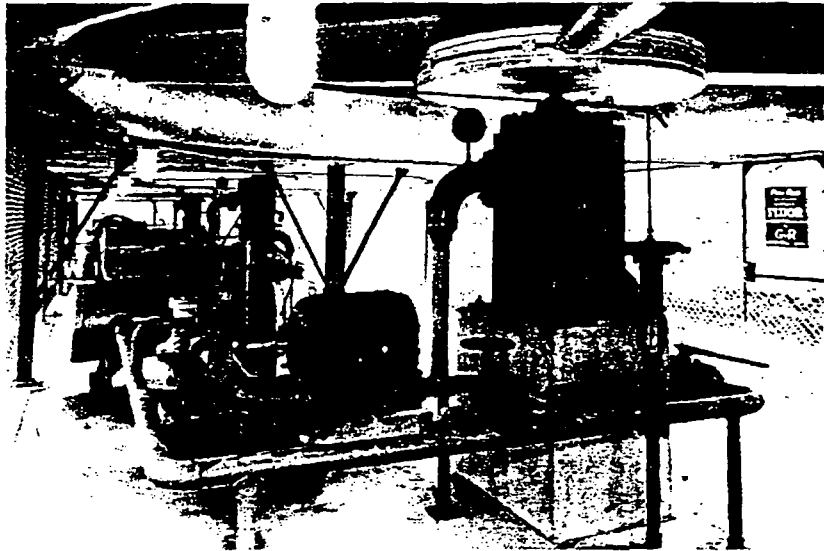


IN the past few years there has been a tremendous increase in the demand for natural gas in the Appalachian area, and a large portion of this gas is now supplied from fields in the Southwest. In transporting gas this long distance, it was impractical to build a pipe line large enough to handle the peak winter demands and have it used at less than capacity for the rest of the year. The alternative was to provide a means of storing gas close to the marketing area, and the most satisfactory and economical method of doing this has been to use depleted gas-producing formations as natural gas reservoirs. One of the newest and largest of these underground storage projects is the Oakford Storage Area, about 25 miles east of Pittsburgh, developed jointly by New York State Natural Gas Corporation and Texas Eastern Transmission Corporation.

Gas was originally discovered around Oakford about 1895 in the Murrysville sand at an average depth of 1400 ft, and in the fifth sand at about 2200 ft in 1905. In their days of peak production, well flow in the Murrysville sand ranged from 10 to 40 million cu ft a day with a rock pressure of 600 psi, and from 20 to 30 million cu ft a day with a pressure of 1100 psi in the fifth sand.

The two sands have an estimated capacity of 105 million cu ft. Maximum storage pressure in the fifth sand is 1200 psi, and in the Murrysville sand is 600 psi. During the summer, gas normally will flow from transmission lines directly to the sands for storage until the sand pressure builds up to line pressure. Then the compressors, protected by scrubbers which remove pipe scale, sand, and other solids from the gas, take over and bring the sand to full storage pressure. There are twelve 2500-hp, two-cycle gas-engine compressors in two compressor buildings, any one of which can be operated as either a first- or second-stage unit.

Four Elliott C-11 60-hp Sealedpower motors drive Rockwell "Rotocycle" hydraulic motor and pump units on the jacket water "Fin-Fan" cooler.



A 30-hp Sealedpower driving the "Fin-Fan" on the dehydration cooler. This drive is also representative of those used on the gas cooling "Fin-Fans."