

## HISTORY OF PIPELINE CONSTRUCTION IN CANADA\*

**Early Pipelines in the United States.**—The use of pipelines in North America is as old as the petroleum and natural gas industry. The history† of development in the United States shows that in 1825 at Fredonia, N.Y., gas from a well 27 ft. deep was transmitted through wooden logs to two stores in that village and used for gas lights in greeting General Lafayette. Also, in 1865, a well drilled 480 ft. deep at Bloomfield, N.Y., encountered natural gas which in 1870 was piped 25 miles to Rochester. The pipeline was made of white pine logs bored to about 8-inch inside diameter and turned down to about 12½-inch outside diameter, with joints of the bell and spigot type similar to those used for cast iron pipes.

The first iron pipeline of appreciable length was laid in 1872 and was of 2-inch inside diameter and 5½ miles long from a gas well at Newton to Titusville, Pa. The early pipelines were for relatively short distances only and, until 1890, were made of wrought iron with screw couplings. The size did not exceed 8 inches and the pipeline pressure was not more than 80 lb. per sq. inch.

High-pressure gas lines were first used in the United States in 1891 by the Indiana Natural Gas and Oil Company, when two parallel lines, each 8 inches in diameter, were built to transport gas 120 miles from gas fields in northern Indiana to Chicago, Ill., at an initial pressure of 525 lb. per sq. inch. The development of the mid-continent area led to the construction of a number of pipelines of substantial size and length and the tendency, with larger available reserves, was to build larger lines as being more economical for large markets.

Much interest was aroused during World War II by the building of the "Big Inch" (24-inch) line from Longview, Tex., to Phoenixville, Pa., a distance of 1,250 miles. It was designed to carry 300,000 bbl. of oil a day but after the War it was changed over to gas transmission. About the same time the "Little Big Inch" (20-inch) products line was built from Beaumont, Tex., to Bayonne, N.J., a distance of 1,485 miles, and carried 235,000 bbl. of refined oil products a day. These pipelines inaugurated an era of long-distance and large-diameter pipeline construction for the delivery of crude oil to the refineries and refined products to the markets. Many such lines have been built since that time, examples being the 24, 26 and 30-inch line of the El Paso Natural Gas Company from the Texas Panhandle to Los Angeles, a total distance of 1,200 miles, designed for pressures up to 850 lb. per sq. inch, and the Transcontinental Gas Pipe Line Corporation's 1,840-mile line from the Texas Rio Grande Valley to metropolitan New York, completed in 1950.

In the United States from 1939 to the end of 1952, 119,611 miles of pipelines were constructed, 13,247 miles of which were built in 1952.

**Early Pipelines in Ontario.**—In Canada the early oil development centred in the peninsula of southwestern Ontario between Lakes Huron, Erie and Ontario. This area, although still producing some oil, is important now on account of its gas production which, through the years, has been piped to various centres of population. Gas-field development followed the oil-field explorations which were commenced in a substantial way about 1860. The first well drilled for natural gas was located

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† See *Problems of Long Distance Transportation of Natural Gas*, Federal Power Commission, Natural Gas Investigation, Docket No. G580, Nov. 1947.