

field with gas that would otherwise be wasted. This was started in 1930 through seven wells, four wells being used for observation. The operation continued until 1939 and was resumed in 1945.

In 1914, the Viking gas field, 90 miles east of Edmonton, was discovered and was later extended to include the Kinsella field. A pipeline from Viking to Edmonton was built in 1923 and, in 1940, the line was extended to the Kinsella field. In 1947, the main pipeline was branched east of Edmonton and extended southward to supply the communities *en route* as far as Red Deer; previously it had been extended north to Vegreville.

In 1926, a 4-inch pipeline was constructed from the town of Fabyan to supply gas to the town of Wainwright, a distance of eight miles.

In 1928, Royalite Oil Company constructed a 4-inch oil line from Turner Valley to the Imperial oil refinery at East Calgary. Previously, the naphtha from Turner Valley gas-cap wells had all been trucked from Turner Valley to Okotoks. In 1929, another 4-inch oil line was constructed by the Alberta Pipe Line Company to serve the Regal refinery at Calgary. It will be recalled that Turner Valley Royalties well encountered crude oil on the west flank of the Turner Valley structure in 1936. A 6-inch pipeline was laid parallel to the Regal line to the south side of the Sarcee Indian Reserve and in 1938 this line was extended to Calgary. This brought the capacity of the three oil pipelines to 28,000 bbl. a day. A maximum production rate of slightly more than 29,000 bbl. a day was reached in Turner Valley in February 1942 but this was not sustained and the pipeline capacity proved adequate for all subsequent Turner Valley production.

The Canol Pipeline.—During World War II, the Canol pipeline was built from the Norman Wells field in the Mackenzie River area of the Northwest Territories across the Cordillera to Whitehorse in Yukon Territory, a distance of 598 miles. The pipeline was 6 inches in diameter for 140 miles on the Whitehorse end; the remainder was 4 inches. The work on the Canol agreement was commenced in 1942 and the contract was terminated in 1945. The line, with 10 pumping stations, was designed for the delivery of 3,000 bbl. a day at the Whitehorse refinery but actually it operated for a time above that amount. Oil was put in the pipeline in December 1943 and more than 1,000,000 bbl. were delivered during the period of operation. At the end of 1944, there were 56 oil wells in the Norman Wells field. The amount of oil actually delivered under the Canol project was 1,649,604 bbl. but, of this, 356,112 bbl. were processed in the Norman Wells refinery for the use of contractors on the project. After the War, the pipeline was abandoned and the pipe removed since, on account of its size, it could never have been operated economically.

Recent Pipeline Developments.—Following the finding of oil at Leduc, Alta., in 1947, a pipeline 8 miles in length and 8 inches in diameter was constructed from the field to Nisku on the Edmonton-Calgary Canadian Pacific Railway line. The reconstruction at Edmonton, in 1948, of the refinery used in Whitehorse under the Canol project led to the extension of this line from Nisku to East Edmonton. With the extension of the Leduc field to Woodbend late in 1947 and the discovery of the Redwater field in 1948, it became apparent that cheaper transportation than could be provided by the railways was needed in order that Alberta oil might reach more distant markets. Accordingly, early in 1949, Imperial Oil Limited proposed to build a 16-inch oil line from Edmonton, Alta., to Regina, Sask. The