

Trans Mountain serves nine refineries; one at Kamloops; four at Vancouver and four in the Puget Sound region of Washington State. Under a contract with Gulf Oil Canada Limited, facilities were completed at the Vancouver terminal to handle storage and transfer of liquid propane from railway tank cars to refrigerated Japanese tankers. First loading under the ten-year contract was made in October 1966 and, in 1971, 3,620,000 bbl were delivered to tankers.

The Montreal refinery centre is served by a 236-mile pipeline which is a joint system of Montreal Pipe Line Company Limited and its wholly owned subsidiary in the United States, Portland Pipe Line Corporation. This line takes delivery of tanker-borne crude from Venezuela, the Middle East and Africa at Portland, Maine. In 1965, the company completed a 24-inch pipeline paralleling the existing 18-inch and 24-inch crude oil lines. An additional 24-inch line under the St. Lawrence River was completed in 1967 to serve refineries in Montreal and, at the same time, 16- and 20-inch lines were installed for future use. Present capacity of the system is 536,000 b/d. Operating statistics of oil pipelines are given in Table 13.6.

**Product pipelines.** Traditionally, a product pipeline carries refined products from oil refineries to truck terminals in large consuming centres. However, with the growth of natural gas processing in Canada resulting in large volumes of liquid hydrocarbons such as propane, butane and pentanes plus being produced, a new type of line has emerged to bring these products to markets or to refineries.

Three product lines in eastern Canada supply markets in Ontario with refined petroleum products. Two of these, Sun-Canadian Pipe Line Company Limited and Sarnia Products Pipe Line, run from refineries at Sarnia to bulk plants in London, Hamilton and Toronto. Trans-Northern Pipe Line Company, once a pipeline carrying products from Montreal to markets in Ontario as far west as Hamilton, now has a two-way flow. Products from Montreal are delivered only in the area east of Brockville, including the Ottawa Valley; products from refineries west of Toronto are carried eastward as far as Kingston.

In western Canada, the Petroleum Transmission Company pipeline carries propane, butane and pentanes plus from a plant at Empress, Alta. to Winnipeg, Man., a distance of 578 miles. The predominant product carried is propane which is also marketed at various locations along the line. Elsewhere in Alberta the Rimbey Pipe Line Co. Ltd. transports condensate from the Rimbey gas plant and takes deliveries from the Rangeland condensate pipeline to serve areas north of Calgary as far as Edmonton. Also going to Edmonton from the Leduc gas conservation plant are three pipelines owned by Nisku Products Pipe Lines Company Limited, one each for propane, butane and pentanes plus. Near Calgary, Home Oil Company Limited operates a condensate pipeline to serve refineries there and also to make deliveries to the Rangeland condensate pipeline. In 1969, a 186-mile, 8- to 12-inch pipeline was built by Dome Petroleum Limited to transport mixed natural gas liquids from the Alberta Natural Gas Company Limited's new gas reprocessing plant at Cochrane to Interprovincial's Edmonton terminal. The liquids are transported to plants at Superior, Wisconsin, and Sarnia, Ont., where they are fractionated into propane, butane and other products for use in the surrounding market areas. Other condensate pipelines in Alberta are associated primarily with production and do not serve end-users.

In western Canada the new pattern of product distribution established by Gulf when they began to reorganize their manufacturing and marketing operations in 1969 is now being followed by Imperial Oil Limited which began to change its petroleum product supply system early in 1972. New product terminals will be built at major Prairie centres and supplied from a large new Edmonton refinery through existing pipeline systems. The principal distributor of the products produced by the new large Edmonton refineries will be Interprovincial which has converted its original 20-inch crude oil line out of Edmonton exclusively to products and gas liquids transportation. Another integral component of Gulf's product transportation system is its 193-mile, 10-inch line from Edmonton southward to terminals in Red Deer and Calgary, constructed in 1970.

**Pipeline tariffs.** The tariffs charged by oil pipeline carriers are subject to over-all regulation by the National Energy Board. Typical of the rates from Edmonton in effect at the end of 1972 were the following: to Vancouver, over a distance of 718 miles, 40.0¢ per barrel; to Regina, 438 miles, 20.7¢; to Winnipeg, 847 miles, 32.7¢; to Sarnia, 1,743 miles, 48.0¢; and to Port Credit,