both the United States fields in Prudhoe Bay and the Canadian fields in the delta.

Both Justice Berger and the National Energy Board recommended rejection of the proposal.

The upper Yukon and the Mackenzie Delta are remote, unspoiled and fragile, and they are the birth place of unique species. Justice Berger wrote: "A gas pipeline will entail much more than a right-of-way. . . . It will be necessary to construct wharves, warehouses, storage sites, air strips — a huge infrastructure . . . a network of hundreds of miles of roads built over the snow and ice. The Arctic Gas project [would double] the capacity of the fleet of tugs and barges on the Mackenzie River. There will be 6,000 construction workers required North of 60 to build the pipeline, and 1,200 more to build gas plants and gathering systems in the Mackenzie Delta. There will be about 130 gravel mining operations . . . 600 river and stream crossings . . . aircraft, tractors, earth movers, trucks and trailers."

Such activity would have fewer lasting environmental and socioeconomic effects if it occurred in southern Canada: massive earth moving there is a routine of life. The north — particularly the upper Yukon — is different.

"The Northern Yukon is an Arctic and sub-Arctic wilderness. . . . The Yukon Coastal Plain and the Old Crow Flats provide essential habitat for hundreds of thousands of migratory waterfowl. . . . The Arctic Gas Pipeline . . . would cross this region, either along the coastal route or . . . the interior route. . . . Along the coastal route [it would

pass] through the restricted calving range of the Porcupine caribou [a herd of 110,000] and have highly adverse effects on the animals during the calving and post-calving phases of their life cycle. The preservation of the herd is incompatible with the building of a gas pipeline."

Parts of the delta, the lacy network of land and water on the edge of Mackenzie Bay and the Beaufort Sea, were also found to be undesirable places for pipelines.

West Mackenzie Bay is the birthing place of the white whales — five thousand of them come there each summer. Berger said emphatically that the west bay should be "an area in which oil and gas exploration and development would be forbidden at any time." He also recommended strict limitations on oil and gas facilities on the delta, particularly the outer delta.

The Berger report on the Arctic Gas Pipeline proposal had its positive as well as its prohibitive parts. It recommended that the west Mackenzie Bay be formally made a whale sanctuary and the outer delta, a bird sanctuary. It also proposed that the northern Yukon, north of the Porcupine River, be made a national wilderness park. Oil and gas exploration would be banned, and native people would have the right to hunt, fish or trap there.

The National Energy Board found the Arctic Gas project to be economically feasible but agreed with Justice Berger that the northernmost parts of the route were "environmentally unacceptable." For this and other reasons the board rejected the proposal.

## The Maple Leaf Project

Foothills Pipe Lines Limited\* applied to build a forty-two-inch pipeline some 817 miles long, from Richards Island at the top of the delta, down the Mackenzie River Valley. The Maple Leaf project would carry natural gas from the Canadian field but not from the United States field in Alaska.

Both Justice Berger and the National Energy Board recommended against its immediate construction.

The problems caused by pipeline construction in the Mackenzie River Valley are essentially different from those of the Yukon and the delta. The Mackenzie River is the longest in Canada and one of the longest in the world. It begins in Great Slave Lake, near Yellowknife in the southwestern part of the Northwest Territories, and flows north through

\* The name Foothills is confusing since it is associated with two separate proposals. The two distinct projects are herein referred to as Foothills (Maple Leaf) and Foothills (Yukon).

trees and lakes to the Beaufort Sea.

It is the north's essential line of communications. In the summer, barges move up and down the river, and planes follow it all year round, carrying oil explorers and technicians north and south. Once, thirty thousand years ago, when the rest of Canada and much of the United States were covered by ice, the valley was open. When the first Indians crossed the land mass that is now beneath the Bering Sea, they moved into the valley. Some of their descendants are there today.

In terms of the environment, Justice Berger said valley construction was feasible. "No major wild-life populations would be threatened and no wilderness areas would be violated. . . . We can devise terms and conditions that will allow a pipeline to be built . . . without significant losses."

But, he said there is more to it than that. Permafrost is the basic fact of life in the Arctic and sub-Arctic. It is rock hard, impervious to water and