

At Mayo, which is typical of the Keno Hill mining region in the Yukon, the differences with Ottawa are much the same. What adds to the severity of the northern winters is, of course, their length. Fort Smith has an average frost-free summer period of only 57 days, and Mayo one of 66 days, compared with 148 frost-free days in Ottawa.

Another factor important in the development of these areas is the problem of transportation. In part this is the direct result of their remoteness. For example, Yellowknife is 650 miles from Edmonton by air and 885 miles by rail and water. Hay River, which is on the south shore of Great Slave Lake and which is the only settlement in the Northwest Territories which is connected by highway with the provinces, is 675 miles from Edmonton by road. Whitehorse, on the Alaska Highway, is 1,300 miles from Edmonton by road and 1,015 miles from Vancouver by sea and rail.

In part, . . . the problem is one of the difficulties and cost of providing adequate transportation facilities. It is true that the airplane has done wonders in opening up the country, particularly for prospectors, and it will continue to play a dominating role in this field. In the Northwest Territories, because of the plethora of lakes in the Precambrian Shield, planes can take prospectors into remote areas, provision them, and even bring in such equipment as drills. The Yukon, apart from its arterial highways, which I will refer to later, is less favourable to the prospector, because lakes in the Cordilleras are few and far between. Once the resources have been proved and production is planned, however, whether the property lies in the Shield or in the Cordilleras, surface transportation becomes essential both for moving heavy equipment into the area and for moving out the product - unless it be gold, which can profitably be carried by air.

In surface transportation lies the principal difficulty of northern development. Water transportation is slow and limited to a short season, and thus involves the costly storage of large inventories. Railroads and roads are expensive both to construct and maintain, and the terrain sometimes makes long detours necessary. Economies can sometimes be achieved by crossing rivers by ferries in summer and ice bridges in winter, but this means a substantial period during the freeze-up and the breakup when the road is unusable. Winter transportation by tractor train is feasible but very costly. Air transportation is, of course, feasible during both winter and summer, but, excepting where landing strips are available for wheeled aircraft, it is interrupted during the freeze-up and breakup.

Clearly the difficulties of transportation are problems which have to be reckoned with in the development of northern Canada. They add directly to the cost of transporting materials into the region and transporting the product out, and they add indirectly to labour costs by making it necessary to pay higher wages than are customary in the provinces and to pay the workers' transportation costs into and out of the region. The Government has taken considerable steps to mitigate the high costs of transportation. For example, it paid two-thirds of the cost of the Alberta section of the 385-mile Mackenzie Highway from the Peace River district to Great Slave Lake, and the whole cost of the Northwest Territories section, amounting in all to \$2,800,000.