

Even in the final phase of mining—taking the product to market—the aeroplane is utilized. Although many commodities, such as base metals, can hardly be transported economically by air, there are some that can. Uranium concentrates and gold, for instance, are so valuable in relation to their weight that air freight is practicable.

Although air freight service has been greatly extended in recent years, the mass movement of bulk goods still depends on water transportation. Traditionally, since the time of the first explorers, the Mackenzie and Yukon Rivers have been used as highways into the Canadian North; both rank among the great river systems of the world. The series of rivers and lakes of the Mackenzie system has a total length of 2,635 miles from the headwaters of the Finlay River in the Rocky Mountains to the Mackenzie Delta on the Arctic Coast; the area drained is 700,000 sq. miles. The Yukon River, from the headwaters of the Nisutlin River in the Mackenzie Mountains, flows for 714 miles through Canada, draining an area of 170,000 sq. miles.

The first obvious drawback to these water highway systems is that they are closed to navigation for about eight months of the year. Modern industry, of course, requires a steady, two-way flow of commerce. It is difficult to compete in the open market if valuable inventories of goods and equipment are immobilized for months at a time. A second drawback is that the barges and river boats can deliver their cargoes only as far as localities along their banks. In the days when the fur trade was the only economic activity in the North this mattered little, since the trading posts were invariably built along the waterways. But it is likely that only a small proportion of the eventual mining centres will be located along the river systems, which means that supplementary transportation will be required on an ever-increasing scale.

In view of these facts, it is likely that water transportation will, in the future, be progressively dwarfed by air, and possibly by railways and roads. But bulk goods can be carried so cheaply by water that the rivers will continue to play their part in the transportation system.

It is only in recent years that roads have begun to probe into what has been described accurately as the trackless wilderness of the Canadian North. The philosophy behind road-building there has required an extremely practical basis: the road must contribute to the development of the mining industry. The exceptions to this rule are the Alaska Highway and the Canol Road, both of which were born of the strategic necessities of the second world war. The former, which traverses the southern part of the Yukon Territory, is still used heavily and is maintained by the Canadian Army. The latter, which runs from the oil fields at Norman Wells on the Mackenzie River in the Northwest Territories to a junction with the Alaska Highway about 75 miles east of Whitehorse, is no longer maintained for traffic.

The road system of the Yukon has been built partly by the Federal Government, partly by the Territorial Government, and partly by the various mining companies. From the major centres of the mining industry at Dawson and Mayo, and from Whitehorse, all-weather roads radiate to adjacent mining properties, and the three centres are themselves connected by road.

In the Northwest Territories, the only major road built to date is the 356-mile Mackenzie Highway which runs from railhead at Grimshaw in Alberta to Hay River on the south shore of Great Slave Lake. From Hay River, in winter, a road