

transportation costs for the very great volume of traffic that moves over the existing waterway, including the present 14-foot canals. Cargoes of wheat and other bulk commodities, that move on the Great Lakes in large carriers capable of carrying 20,000 tons or more in one cargo, must be trans-shipped into boats having a maximum capacity of 3,000 tons of cargo, and again trans-shipped at Montreal, or at one of the other river ports, into ocean carriers. The economies to be effected in these movements alone would have justified completion of the deep waterway years ago.

A new factor to be considered at this time is the development of a great iron ore project on the Quebec-Labrador border, which will have its outlet to deep water on the Gulf of the St. Lawrence. Some \$250,000,000 are presently being spent on this iron ore project, which includes a railroad 350 miles in length and extensive harbour construction. It is anticipated that the initial deliveries of iron ore from this project will be at the rate of 20,000,000 tons per annum. Without the deep-water development, important markets for these ores in the Great Lakes area are out of economic reach. On the other hand, Quebec-Labrador iron ore is the best possible answer to the supply problems of steel industries located on the Great Lakes.

Consider the position of the steel mills in the Great Lakes district, which account for about 75 or 80 per cent of the steel produced in the United States. Ore requirements continue to rise, not only because of additions to steel capacity, but because, with a shortage of scrap, it is taking more pig iron to make a ton of steel. The ore comes preponderantly from the iron ranges of the Lake Superior district, but production of the types now in use has just about reached its maximum annual rate. Notice I do not say that exhaustion is imminent. Without going into that subject, I say only that there is little hope of an increased rate of production. Current rates may be maintained for some years, but after that a more or less slow decline is in prospect. The problem is one of a growing gap between supplies and requirements.

There is more than one source of new supplies to fill this gap, and probably each will be used to a greater or a lesser extent. Without the seaway, however, the solution of the problem promises to involve more costly ore for the mills of the Great Lakes district, and to be less satisfactory all around. It will take a considerable increase in ore prices to make imports competitive much further inland than Pittsburgh. Quebec-Labrador ore would be only one of several strong contenders for the more limited market tributary to the sea-coast.

Processes are being developed for concentrating one form of taconite, available in the Lake Superior district, but it has not yet been demonstrated that commercial production is possible at present prices. The best hope is that the concentrates would be competitive if production could be maintained at full plant capacity. On the other hand, the high overhead of the concentration plant would make it vulnerable to any slackening of demand. Accordingly it appears that it would take a similar substantial increase in Lake ore prices to bring about a development of this source on the scale required.