

concentrate. To improve their physical characteristics for blast furnace feed, either of these high grade products may be agglomerated if necessary. Two common methods of agglomeration are sintering and pelletizing. Those countries which possess large deposits of high grade direct-shipping ores therefore have, in this respect, one advantage over Canadian producers which mine medium-grade direct-shipping iron ore or low-grade concentrating-type iron ore.

Another trend is the increasing investment by iron and steel companies in iron-ore producing properties to obtain a 'captive' supply of iron ore. To date, this has been to Canada's advantage, since most of the development of iron-ore deposits in this country has been financed by large American steel producers. The resulting iron ore producing companies then have a captive market and need not worry, to a large extent, over markets. Most of the iron-mining companies have capacity in excess of that which the participating companies use and this excess has been sold mainly to Europe.

The iron and steel industry in Britain and Western Europe is now consuming more ore than its traditional domestic and foreign sources can supply. There is, therefore, a large potential market for Canadian iron ore in Europe. Many European consumers, anxious to obtain a captive source of ore, are beginning to follow the lead of their American counterparts by investing in iron ore developments in overseas countries. Two West German firms and one Italian group own shares in Wabush Mines, which is developing a large beneficiating-grade iron deposit in Labrador for production by 1965. Much European capital, however, is being directed towards countries in Africa, particularly Liberia, that have large deposits of easily-mined, high-grade direct-shipping iron ore. This will assure European steelmakers a supply of ore from these deposits at the expense of future Canadian sales.

Japan, which has traditionally purchased nearly all its iron-ore requirements in competitive world markets, has also begun to participate in financing iron-mining developments in several countries.

The Department of Mines and Technical Surveys periodically makes forecasts of Canadian iron-ore production. Projected on the basis of company intentions and on probable activities in the iron ore field, it appears that Canadian production by the mid-1960's will be above 34 million long tons annually. Projecting further ahead to 1970, it seems possible that Canadian output may attain production of from 45 to 55 million tons a year. These estimates, of course, hinge to a certain extent on developments that occur in other countries, including the United States. There are large reserves of low grade taconite ores in Minnesota and Michigan, which, given favorable taxation considerations, may be further developed for the production of concentrates.

Resources

Sufficient exploration has taken place in Canada to indicate that Canadian resources of iron ore are tremendous. Most known deposits are of the medium grade, direct-shipping variety or of the low-grade, concentrating type. Iron formation extends in an almost continuous belt from the northerly tip of the west coast of Ungava Bay to an area lying about 150 miles north of the Gulf of St. Lawrence. Many occurrences are also found in an irregular belt extending from Lake Mistassini in Quebec westward through the Kirkland Lake area to the Lake St. Joseph area in Northern Ontario. Other large deposits are known