day publishes reports from 90 points in 33 counties of Outario. From these we gather that on low lands in various places fall wheat has suffered winter killing or drowning, but in the majority of places it promises very well indeed. Accounts are not so favorable of spring wheat, which does not show equally good promise, but a larger acreage would seem to be sown. Barley, as was to be expected from the lessened American demand and reduced price, is sown in reduced area, and its place taken by spring wheat and coarse grains; the quality is likely to be good. Root crops are promising, and in fact the accounts of spring crops are on the whole satisfactory. In Ontario and Simcoe counties last week's rain storm has done injury to farmers. The yield of hay is everywhere likely to be large, and fruit promises to be abundant.

## MINES AND MINERALS IN ONTARIO.

The Report of the Ontario Mining Commission is before us, and it is no more than is due to say that it is a painstaking and valuable report, containing much that is likely to be serviceable to Canadian mining industries. It forms a volume of 566 pages, is carefully indexed, and contains a glossary of mining terms and a comparison of mineral production in the United States and Canada.

In noticing, two years ago, its formation, we expressed the opinion that the Commission would serve a good purpose if it should point out clearly the best way to proceed in the development of our mineral resources. And at the same time we stated that too much must not be expected from such an enquiry. For after all it was only an enquiry, which at most could perhaps give us hints how best to proceed in making use of information we already possessed. It was not to open and work mines for us; that is the work of capitalists and miners. It is forcibly stated by one of the gentlemen examined by the Commissioners, Mr. Byron E. Walker, page 421, that "the value of such reports [in the United States] in inducing settlement, and in creating enterprises of many characters depending on raw material, is incalculable." Again, MONETARY TIMES, 21st September, 1888, we noted the visits of the Commission to Northern Ontario, and gave particulars of the Port Arthur silver district, the Sudbury copper and nickel region, notably the Stobie, the Copper Cliff, and the Evans mines. The ore of these mines, we then said, "is a mixture of chalcopyrite and nickel bearing pyrrhotite, carrying from 7 to 15 per cent. of the combined metals." We also mentioned a mine in Graham Township, seventeen miles from Sudbury, yielding a vein-matter from which can be obtained free gold by washing and amalgamating in a pan.

Pages 88 to 92 of the report give particulars of these and other copper and nickel properties, with maps and sections. Pages 106 to 118 inclusive are devoted to evidence of prospectors and conclusions of the Commission with respect to the Madoc or Marmora, the Denison, and the Lake of the minous coal in this province, and consider. both pine and hardwood lumber, which we

we find it stated that "the prospects of is argued that the charcoal iron industry paying gold mines are singularly good."

The plan of enquiry pursued by the Commission is thus outlined : (1.) The geology of the province, with special reference to its economic minerals : assigned to Robert Bell, M.D., LL.D. (2.) Detailed descriptions and maps of the working mines and important undeveloped mineral occurrences, etc. : assigned to Mr. W. H. Merritt, F.G.S. (3.) Trade in mineral products, imports and exports, enquiry into depression in the mining industry : assigned to John Charlton, M. P., chairman. (4.) Information and suggestions on mining laws and regulations: assigned to Mr. Archibald Blue, secretary. (5.) The best means of promoting the metallurgical industry : also assigned to the secretary. (6.) The organization of a Bureau of Mines for the province; the founding of a geological museum; the collection and publication of mining statistics; technical instruction in its relation to mining and metallurgy : assigned to Dr. Bell, Mr. Merritt, and the secretary.

The letter of transmission states that "the Commission has not followed in the footsteps of others, but has pursued the course marked out for itself; and it professes to present no inference, opinion, or statement of fact which is not warranted by the evidence, the study and observation of its members, or the testimony of the highest authorities." It is stated, with truth, that the experiments recently carried on with alloys of nickel and steel cause great interest to be attached to Ontario's deposits of nickeliferous ores. The ranges of these ores north of Georgian Bay are more extensive than any found elsewhere, and "in spite of its unattractive aspect, this may prove to be the most valuable portion of territory in the whole of Ontario."

With respect to the mining laws, the Commissioners, in spite of numerous com plaints, do not consider that very radical changes are demanded. The provisions of the Act which relate to "mining claims" are found by experience to be unsuited to the occurrence of minerals in this province, where no alluvial deposits of minerals are known to exist, and it does not appear that any properties are being secured under them. It is only in the provisions which relate to "mining locations" that changes in the law are felt to be desirable. The custom of terming a mining location a 'mine " is itself misleading and mischiev-0118.

An interesting, and indeed eloquent, paragraph is that referring to the marvel. lous progress of the iron industry in Great The achievements Britain. wrought through the genius of Darby, who discovered coke, the cylindrical bellows of Smeaton, the steam engine of Watt, the puddling process and the puddle rolls of Cort, the hot blast of Neilson, the steam hammer of Na smyth, the various processes of Huntsman, Heath, Bessemer, Mushet, Siemens, and others for the conversion of iron into steel, the utilisation of furnace gases and the improvements in furnace construction, are steps in its wonderful course.

Possessing neither anthracite nor bitu-

gives the best promise for Ontario. The section devoted to this subject, pp. 328 to 345, is full of interest, containing as it does exhaustive experiences and statistics. As to charcoal iron, "the supply is limited. the demand is usually constant, superior quality causes it to be indispensable for certain purposes, and where ore, fuel, and flux are found in proximity the margin of profit may be regarded as fairly liberal."

In spite of the failures made in the furnaces at Lansdowne, at Charlotteville, at Madoc, in by gone years-and it must be remembered that pioneers in iron making are rarely successful anywhere—the report considers that charcoal iron ought to be as successfully made in Ontario as in New York, Wisconsin, or Michigan. From the evidence submitted the conclusion is reached that the cost of producing charcoal iron in Ontario would be about \$13.60 per long ton, the figures of ten estimates ranging from \$9.08 for a hot blast furnace of 60 tons daily capacity to \$18.50 for one to five tons capacity. There is no charcoal iron made in Ontario, however, and all that is required for the manufacture of malleable castings is imported from the United States at a cost ranging from \$26 to \$38 per long ton, according to quality-freight and duty paid. "These prices ought to be considered as affording a liberal margin of profit on the cost of production, especially when the statement is made upon expert authority that a furnace of 9,000 tons yearly capacity would earn ten per cent. on a capital of \$200,000 at a profit of \$2.25 per ton of pig iron produced. Furnaces located at favorable points should be able to supply the home market with all the charcoal iron it wants, and, besides, keep out much of the poorer coke iron imported from other countries. The industry, however, is of first-class importance, and every proper means should be taken to secure its establishment in Ontario."

So good an authority as Mr. Birkinbine, editor of the United States Charcoal Iron Journal, says : "We are certain that superior charcoal pig can be made in Canada, and delivered at its principal cities, at a profit, for the same price that ordinary English coke iron is now sold there."

## LUMBER INSPECTION.

A step of more than usual import has just been taken by the Lumber Section of the 'foronto Board of Trade. It relates to the inspection of lumber at this port. Hitherto there have been no rules governing inspection at Toronto. If one wanted a cargo inspected he must hire an expert, who would decide qualities upon his individual experience or by arbitrary rules. The lack has long been felt of a code of inspection regulations, which should define what constituted grades of sawn lumber; what existing defects affected the grade; the effect of knots, splits, etc. A committee of the Lumber Section of the Toronto Board of Trade, after spending time and thought over the matter, lately formulated a basis for the inspection of Woods districts. Regarding the last named, ing the distance these have to be hauled, it understand meets with the approval of the