

NATURAL RESOURCES SURVEY.

A Survey of the Natural Resources of Canada is being conducted under the direction of Arthur D. Little, Limited, of Montreal, and the following article indicates the nature and scope of this important work. Municipalities desiring special and particular scientific information regarding its local resources and the opportunities for their development are invited to correspond with the directors of the survey.

The first step in any plan for the broad development of the Natural Resources of the Dominion necessarily involves the collection of definite and accurate information regarding the resources themselves and the systematic classification of this information in such form that it shall be readily available to those who may be expected to utilize it to advantage.

With full appreciation of the splendid work of many governmental, corporate and private agencies it may fairly be said that the resources of Canada have as yet scarcely been touched. Many recognized sources of national wealth and individual prosperity are still practically ignored. Undoubtedly many others, now wholly unknown, await discovery and exploration.

It is nevertheless true that a vast amount of information of the highest practical value has been accumulated by the Government Departments, notably, for example, by the Department of Mines and the Water Powers Branch, Department of the Interior, the Railways, the Canadian Mining Institute, Society of Chemical Industry, and other scientific bodies, trade organizations, industrial corporations and individual explorers, engineers and prospectors. A continuous and increasing stream of data may confidently be expected to flow from these sources. The immediate need is, therefore, not for new agencies for obtaining new facts, but for an effective organization which shall collate and classify the data already in hand or directly forthcoming. It is the hope and purpose of its sponsors to supply such an organization in the Natural Resources Survey.

It is the initial object of the Survey to recast into quickly available form the immense mass of valuable information regarding Canadian resources now stagnant in Government publications, scientific and technical journals, corporation records and the special reports of individuals. It is therefore proposed to abstract this data and transfer the salient and important facts regarding agriculture, mines, minerals, waterpowers, forests, fisheries and furs to standardized forms capable of close classification and to so control and key the information that related groups of facts may be promptly furnished as required. Concurrently therewith and supplementary thereto a census will be made of Canadian scientific and technical men with particular reference to their specialized lines of study and performance; the special libraries and research facilities of the country will be catalogued and classified lists made of the corporations and individuals most directly interested in specific natural resources, and presumably able to utilize them to advantage.

This plan, so comprehensive in scope and involving such widespread benefits to the Dominion, was originated by Lord Shaughnessy. Its development was in May, 1916, entrusted by His Lordship to Arthur D. Little, Limited, a Canadian Corporation operating under Dominion charter, and including in its organization chemists and engineers of many years experience in the industrial applications of science in many parts of the world. In their consideration of the broader questions of policy and development the Directors will be guided by the Survey Advisory Board composed of eminent specialists and organizers.

Although initiated by the Executive of the Canadian Pacific Railway and supported by that Company, the work of the Survey will be conducted in the interest of no individual or corporation, but impartially for the benefit of all and with the sole purpose of advancing the industrial development and prosperity of the Dominion.

Obviously a work of this magnitude cannot attain its full measure of usefulness without the cordial support and concurrent effort of all the agencies, organizations and individuals having at heart the welfare of the nation and in a position to co-operate with the Survey. The Directors have already been assured of the support of scientific organizations and business associations, and they confidently appeal to corporations and individuals throughout the Dominion for co-operation. The mass of detail to be considered is so great that the Survey must in large part rely upon the voluntary assistance of occasional and part time collaborators, and the Directors therefore particularly desire to be brought into touch with scientific and technical specialists who are prepared to furnish information re-

TRANSPORTATION FACILITIES.

W. SANFORD EVANS.

Chairman, Georgian Bay Canal Commission.

Mr. Sanford Evans, the Chairman of the Georgian Bay Canal Commission, who was to contribute an article for our preparedness number on the subject of CANADIAN WHEAT AND ITS MARKETING finds the wheat situation so very peculiar at the moment because of the war, that he has decided to postpone his article until better conditions prevail. The article will be published in a later edition of this Journal and mailed to all readers of this number. The following are excerpts taken from Mr. Evans' interim report of general conditions of transportation bearing on the economic problem of the proposed Georgian Bay Canal.

While by comparison with that of the United States the Canadian mercantile fleet on the inland waters is small, it is yet of considerable size and its capacity has been steadily growing.

In actual number of vessels there has been no great change in recent years, but the type and size have improved. In the fiscal year 1899-1900 there were 242 vessels so engaged; in 1905-06 the number was 270; and in 1913-14 the number was 265.

In the autumn of 1915, the United States and Canada were the only important sources of wheat supply for Europe. Southern Russia and Roumania were still blocked at the Dardanelles, and Northern Russia could send out only very small quantities through Archangel; the Government of India was in control of the supplies in that country and was conserving the surplus; Australia, owing to the partial crop failure in 1914 and pending the harvesting of the new crop, had nothing to export; and the Argentine had already disposed of the greater part of its 1914-15 surplus.

Canada has never yet been able to secure at Canadian ports enough vessels to carry all the Canadian exports; that is, no measures so far taken to that end have been sufficient to seriously disturb the simple economic balance of the load factor along the North Atlantic coast.

It is evident that not only do the general conditions of ocean transportation largely determine the distribution of international commerce, but that in the one particular of a change in the basis of freight rates, and even when there is no discrimination for or against any route, a factor exists of such varying power that it may seem to produce different kinds of effects according to the degree to which rates are raised or lowered.

Western Canadian wheat fields are further from the ocean than the Argentine wheat fields, and although interior transportation costs per mile in Canada are more favorable, the Argentine is in a good competitive position when the spread in ocean rates is only from 3 to 6 cents per bushel, but when the spread is 30 cents per bushel, Western Canada can obtain a good price for its wheat, can absorb the costs of all-rail transportation in the winter months and then can undersell Argentine wheat in Europe even in the very months in which Argentine wheat is intrinsically cheapest.

garding specific resources or willing to abstract reports and publications dealing with such resources.

The Survey intends to issue from time to time Bulletins devoted to particular resources or immediate industrial opportunities and to place, as occasion arises, special reports before corporations and individuals in Canada, Great Britain and the United States, who may be expected to base industrial developments thereon.

The plan of the Survey further provides for the prosecution of industrial research on lines selected for their promise of yielding results of broad general benefit or of immediate advantage to individual communities or industries. Several such researches are already in progress, among which may be mentioned the series of co-ordinated studies which has for its object the industrial utilization of cereal straws.

The Survey is, obviously, a natural complement and correlative of the larger plans, to which the Federal and Imperial Governments are committed, for mobilizing the resources of the Dominion and the Empire.

Correspondence regarding the work of the Natural Resources Survey and tenders of co-operation should be addressed to the Directors.