

Building Materials in Western Canada

Valuable Resources Being Gradually Opened Up

With the exception of British Columbia there is very little building stone produced in Western Canada. This is due to two causes. First, the rocks which underlie the developed portions of the Prairie Provinces are of comparatively recent age and are consequently soft in character and weather rapidly; second, there are very few rock exposures in the settled portions of these provinces except in the Rocky mountains and the foot hills.

In British Columbia there are large potential resources of building stone. They have, however, been developed only in certain localities on the Pacific Coast and have been confined to Cretaceous sandstone and certain volcanic rocks, situated on Vancouver Island and adjacent islands. Varieties of marble are also quarried on Texada island.

Building Stones and Clays

While the Prairie Provinces have not been proved to contain building stone in great quantity they possess large deposits of lime-rock, shales and clay suitable for the manufacture of cement; also large deposits of clay and shale suitable for the manufacture of brick of various kinds, tiles, sewer pipe, etc.

The region bordered on the east by the Great Plains, and on the west by the Coast range, does not, so far as known, contain extensive clay resources. Shales also are rare because, in most instances, the deposits of argillaceous material have been altered to slaty rock or schists.

Exploration in the Pacific Coast region has, thus far, disclosed only a limited extent of clay resources, but important shale deposits are found at Sumas mountain, southeast of Vancouver. Surface clays are more extensive than the shale deposits and a number of these clays are found in the vicinity of Vancouver, Victoria and on several of the islands in the strait of Georgia.

The cement plants in operation in Western Canada are situated at: Babcock, Manitoba.

Winnipeg, Man., (under construction.)

Calgary, Alberta.

Exshaw, Alberta.

Blairmore, Alberta (one operating and one under construction.)

West of Edmonton, Alberta, (one under construction.)

Todd inlet, British Columbia, (one operating and one under construction.)

During the summer of 1911, owing to a shortage in the supply of cement in Western Canada, the duty upon cement was reduced by 50 per cent. for a period of six months.

In the above list there are four new plants described as under construction, but all expect to be in operation in the spring of 1913. The Rocky Mountains undoubtedly contain enormous deposits of raw material similar to that used at Blairmore and Exshaw which will be developed as the demand increases.—W.J.D.

CENSUS GLEANINGS

Growth of Western Canada and What It May Mean

Census statistics for the Prairie Provinces open up a field for some interesting and instructive comparisons. During the last census decade the rural population of Manitoba increased from 134,738 to 255,249 or at the rate of 88.1 per cent. The urban population increased from 70,473 to 200,365, or at the rate of 184.3 per cent. In the older portions of the Province the increase has been almost entirely urban, one rural electoral district even showing a small decline.

In Saskatchewan, Canada's greatest wheat-producing province, and in which the most marked advance in population was made, the rural population increased during the census decade from 73,729 to 361,067, or at the rate of 389.7 per cent. At the same time the urban population increased from 17,550 to 131,365 or at the rate of 648.5 per cent. No fewer than 211 new towns and villages were incorporated in Saskatchewan during the census decade.

Alberta shows a rural increase from 52,399 to 232,726, which is a percentage increase of 344.1. The urban population increased from 20,623 to 141,937, or a percentage increase of 588.2. In all, 82 new towns and villages were organized in Alberta during the census decade just closed.

These three provinces show a total rural increase of 538,176, or 93.6 per cent of the rural increase for the whole Dominion. The urban increase was 365,021 making a total of 903,197, or almost half the total increase recorded for the whole of Canada. The centre of population has, therefore, taken a decided move westward.

In view of the fact that vast areas of land are still to be opened up, it is probable that the next census will show further great gains in the rural population. But it is significant that the urban population is growing with much greater rapidity than is the rural. Further, the specialized form in which agriculture is carried on in the Prairie provinces is certain to have an important bearing on the movement of population. Many Western farmers are of the nomadic type. Their methods of farming make them such. Specialization in agriculture as it is practiced in the West must inevitably lead to soil depletion. The valuable wheat producing constituents of the soil are being steadily mined, and it is only a matter of time till nothing is left but "wheat sick" soil, which is largely devoid of humus and other plant material. Already, Manitoba has thousands of acres of abandoned lands, as a direct result of over-specialization.

It would be well, therefore, the farmer would remember that specialization in any industry is only permanently possible where the supply of raw material is unlimited. Moreover, where a high degree of in-

dustrial specialization is engaged in without adequate care being taken to utilize the by-products, there is sure to be very serious waste. Indeed, the modern capitalist of industry is frequently as much concerned in seeing that the by-products are turned to good account, as he is in supervising the manufacture of his staple product. And the farmer must be equally business-like if his work is to be permanent.—A. D.

Lake States Forest Fire Conference

Divorce of forest fire organizations from politics, efficient forest patrolmen and co-operation between the State and private fire-fighting associations formed between timber owners and lumbermen, were the slogans of those who attended the second annual meeting of the Lake States Forest Fire Conference, held at Lansing, Michigan, January 21st and 22nd.

The legislative committee also recommended:

"Absolute divorce between game and forest departments; Work of forest protection and administration to be placed in hands of a competent and non-partisan board; Appointment by Board of Commission of an expert and competent forester, together with necessary assistants, who shall have charge of and supervision over all forest administration and protection; General forest and fire law along lines of the present Minnesota law, with annual land tax based on soil values, and timber tax based on value of timber at the time it is removed from the land; Appropriation of sufficient funds to enable the State Forester to enforce the full existing forest and fire laws and such others as may be passed."

The province of Ontario was represented at the conference by Mr. E. J. Zavits, Provincial Forester.

Resolutions were adopted urging that the Lake states and the province of Ontario provide large appropriations for fire protection; that new associations for fire-fighting be formed, to co-operate with all forest fire-fighting organizations; and to urge and advocate the reservation of non-agricultural lands.

It was shown at the Conference that the new forestry law of Minnesota is the most progressive in the Great Lakes region and that of Michigan is the most inefficient.—Ex.

Eighty-two per cent. of the 20,000 fires whose origin has been tabulated by the Texas State Insurance Board, are due to preventable causes. How the insurance rate would be reduced if even half of these preventable fires were actually prevented! Judging by the scanty information available similar conditions exist in Canada, but our Statistical facilities are so inadequate that we cannot make such convincing statements on the subject as Texas can.

Latent Water-Power in British Columbia

Recent Provincial Report Gives Much Valuable Information

The Minister of the Department of Lands of British Columbia—Honourable W. R. Ross—who has jurisdiction over the waters of the province, has just issued his Annual Report for the year ending 31st of December 1912.

This report is a comprehensive and valuable publication and sets forth the work which is being performed, and which has already been accomplished in connection with the administration and use of the waters of the Province. More particular attention is given to the subject of irrigation on account of the great importance which attaches to the use of water for agricultural purposes in British Columbia. Specific reference is made to some of the more important water-power streams in the Kootenays. For example—a special investigation has been made upon the Kootenay river which has a total fall of 330 feet in a distance of 18 miles. As is known the well constructed plants of the West Kootenay Power and Light Company which supplies electric energy to so many of the mining plants in the 'Boundary country' are situated upon the Kootenay river at Upper and Lower Bonington Falls.

Reference is also made to the Pend d'Oreille river. It is one of the more important water-power streams of the Northwestern States, the larger part of its drainage area of over 25000 square miles is in the United States. In Canada the Pend d'Oreille has a fall of 423 feet in 16 miles.

When one bears in mind the grant recently made by the United States Government to the Montana Water and Power Company, which company proposes to supply the power for the electrical operation of 450 miles of line of the Chicago, St. Paul and Puget Sound railway between Harrowtown, Montana and Avery, Idaho, at an estimated annual saving to the Road of \$250,000 per year, one is impressed with the latent hydro-electric possibilities of important rivers like the Kootenay and the Pend d'Oreille.

This report of the Department of Lands contains the report of the Minister, reports by the heads of various branches, including the Forest Water Branch, and Survey Branches. It contains acts and regulations appertaining to various natural resources, and descriptions of how applications may be made to secure various grants and permits pertaining their use.

According to a press report, Mr. R. D. Prettie, Chief Forester for the Canadian Pacific railway stated recently, at a banquet in Toronto, that that Company was spending as much on forestry this year as is being spent by the whole United States Forest Service.