

NATURAL RESOURCES OF THE DOMINION OF CANADA.

Lignite of rather poor quality is found in the Turtle Mountain district of southwestern Manitoba, covering an area of about forty miles long and twenty miles wide. While small quantities of this lignite have been mined, no mining operations on an extensive scale have ever been undertaken. There are extensive beds of peat in Manitoba. In the Souris district of southern Saskatchewan there is lignite of better quality, beginning a little west of the Manitoba boundary, and extending along the United States frontier for about 150 miles, with an average width of about twenty-five miles from south to north. There are a number of small coal mines near Estevan in this district, and the present annual output is about 200,000 tons. There are believed to be deposits of lignite extending almost completely across the southern part of Saskatchewan from Estevan to Alberta. In the eastern part of the province of Alberta, both in the southern and northern districts, there are extensive deposits of semi-bituminous coal, grading between lignite and bituminous. The quality of the coal improves as it extends westward, and when the foothills are reached it becomes bituminous, while in the basin of the Cascade river, a few miles east of Banff, it becomes anthracite in some localities. It has been estimated that there are 400,000,000 tons of anthracite coal and 1,200,000,000 tons of soft coal in the basin of the Cascade river. The total areas of known coal deposits in the province of Alberta, including anthracite, bituminous and semi-bituminous coals, have been estimated to underlie 30,000 square miles of the province. The principal mining centres of semi-bituminous coal are along the Belly river between Lethbridge and Medicine Hat, and in the vicinity of the city of Edmonton. The principal mines of bituminous coal being operated are along the line of the Crownsnest branch of the Canadian Pacific railway, a little east of the British Columbia boundary, while the anthracite mines are near Canmore and Bankhead on the main line of the Canadian Pacific railway.

Recent experiments made by the United States Bureau of Mines, with lignites inferior to those of the Prairie Provinces of Canada, have demonstrated that cheap power can be produced from them. Referring to these experiments in a report to the Canadian Commission of Conservation, Mr. W. J. Dick says: "It was found that the low-grade lignite of North Dakota developed as much power when converted into producer gas as did the best West Virginia bituminous coal when utilized under the steam boiler." The Mines Branch, Canadian Department of Mines, made seven ordinary gas-producer trials with lignites and lignitic coals of low calorific values. Good results were obtained in every case, the gas being of high calorific value and uniform in quality. It is believed that in districts where water-power cannot be economically developed electric energy can be generated from those lignites and distributed to towns some distance from the mines.

The Crownsnest Pass coalfield in British Columbia, not far from the Alberta boundary, has been estimated by Mr. James McEvoy to underlie 230 square miles, with a workable thickness of coal seams of 100 feet, and to contain 22,595,200,000 tons of coal. Farther north, at the Kananaskis pass, partly in British Columbia and partly in Alberta,