

With respect to the coal reserves of Canada, the estimate of Canada's coal reserves, as compiled by the late Dr. D. B. Dowling for the Twelfth International Geological Congress, Toronto, 1913, and as reproduced in Geological Survey of Canada, Memoir 59, 1915, should be regarded only as a rough approximation of coal occurring in the earth as a geological phenomenon—not as an estimate of coal that may be considered an economic asset. It was stated also that an estimate of mineable coal reserves of Canada was being prepared for the Royal Commission on Coal. This preliminary estimate appears in Table 22 and is shown in a series of diagrams at the base of the accompanying map.

It will be noted that the estimated coal reserves are arranged in five different groups as opposed to the ten groups shown on the map legend. The reason for this is that more than one rank of coal occurs in some of the deposits and the tonnages of some of these are so small or indefinite, due to the lack of chemical analysis, that it is difficult or impossible to separate the different ranks. For example, the known deposits of anthracitic coals in Canada are relatively small and such reserves as do exist have been included with those of Low Volatile Bituminous Coals in Group I of the tabulation and the graphical diagrams. On the other hand Group II of the estimate consists almost entirely of Medium Volatile Bituminous Coal, whereas Group III of the table includes the three ranks of High Volatile Bituminous Coals, A, B and C. Group IV includes the three ranks of Sub-bituminous Coals A, B and C, and Group V includes the two groups of lignitic coals—Lignite Coal and Brown Coal.

The reserves of each of these groups are calculated under the headings "Probable Reserves" and "Possible (Additional) Reserves". The Probable Reserves are those that have been calculated on considerable geological, drilling, and mining development data, whereas the Possible (Additional) Reserves are those based on geological data of much more limited extent. The probable reserves are indicated on the five diagrams by a lined pattern whereas the possible reserves are indicated by a blank colour.

In estimating the mineable coal reserves of Canada, it was found that no common yardstick with respect to minimum thickness of coal and maximum depth of mining could be employed as these differed materially in different provinces. The limits with respect to these factors that have been adopted are those found practical in the different coalfields under existing mining conditions.

Thus, in Nova Scotia where coal mining is at present being carried to a depth of almost 4,000 feet and in the submarine areas of the Sydney Coalfield where it is estimated that mining operations within this depth can be carried seaward for a distance of at least five miles from the outcrop, these limits have been set for economic mining development. The minimum thickness of coal seam that can be profitably mined at these limits of depth and distance is placed at 3 feet. In the Joggins coal area of the Cumberland Coalfield, N.S., however, coal seams $2\frac{1}{2}$ feet thick are being mined profitably, and there a relatively small tonnage has been accordingly included.

In New Brunswick the coal seam being mined averages 18 inches in thickness and everywhere lies within 500 feet of the surface, and these figures have been used as the limits of economic development.

In Saskatchewan the lignite seams being mined are everywhere less than 500 feet in depth and, with the exception of the near-surface mining in the Kelfield coal area of western Saskatchewan, where the coal seam being mined is about 30 inches thick, all the coal seams under development are over 3 feet in thickness.