

**Petroleum.**—The production of crude petroleum in Canada during 1927 was 476,591 barrels, as compared with 364,444 barrels produced in 1926. Of this production 139,606 barrels came from Ontario, 18,244 from New Brunswick and 318,741 from Alberta. Alberta thus produced more than all the rest of Canada and accounted mainly for the increased production in 1927. The Turner Valley field is the principal source of production in Alberta, and contains the famous Royalite No. 4 well, which produced at the average rate of 620 barrels per day during 1927. The wells in this field give a wet gas from which a very high grade of crude naphtha is separated. The producing horizons in Western Canada were formerly considered to be the Dakota and Kootenay shale formations of the Upper and Lower Cretaceous periods, but the Royalite No. 4 well has proved that much better producing horizons exist in a lower formation, a brown porous dolomitic limestone, below the Kootenay formation. A small production of petroleum has also been obtained in the Wainwright field, about 120 miles east of Edmonton, where the oil is heavy and of a lower grade. The principal Ontario oil fields are situated in the southwestern peninsula between lake Huron and lake Erie. The oil districts are all situated within an area underlain by Devonian strata, usually in an anticlinal axis, and the petroleum is largely obtained from the horizons in the Onondaga at varying depths in the different localities.

#### Subsection 2.—Other Non-Metallic Minerals.

**Asbestos.**—Canada produces more asbestos than any other country. The value of the annual output of asbestos has increased from less than \$25,000 in 1880 to \$10,621,013 in 1927, so that, aside from coal, asbestos is now the most important non-metallic mineral product. In 1927, the world's production amounted to about 331,872 long tons; of this tonnage Canada produced 245,337 long tons or 73.9 p.c., Rhodesia 29,621 tons or 8.9 p.c., Russia 20,822 long tons or 6.3 p.c., South Africa 19,762 tons or 6.0 p.c., Cyprus 11,200 tons or 3.4 p.c., and the United States 2,666 tons.

**Quebec.**—The Eastern Townships have for many years been the most productive asbestos-mining area in the world. The most important deposits are those at Black lake, in Coleraine township; at Thetford and Robertsonville, in Thetford township; at East Broughton, in Broughton township, and at Danville, in Shipton township. The veins of asbestos traverse the serpentine in all directions, and as a rule the fibre lies at right angles to the walls of the veins. The veins vary in width from  $\frac{1}{4}$  inch to  $\frac{1}{2}$  inch, and occasionally fibre has been obtained several inches in length. The fibre is of good quality and well adapted for spinning. In the East Broughton deposits, the serpentine occurs enclosed in a highly quartzose slate, probably of Precambrian age. In the Danville area, asbestos up to  $\frac{1}{2}$  inch in length occurs abundantly, and the whole of the serpentine is impregnated with fine, short fibre, giving a first-class milling material.

Open-cut methods of mining are adopted almost invariably throughout the Canadian asbestos fields. Nearly all the mining companies have installed machinery for the crushing, fibrizing, screening and grading of the mine product. In addition, 10 plants in Canada manufacture asbestos products, including the following commodities:—asbestos paper and mill board; asbestos roofing of all kinds; asbestos rigid shingles; asbestos building materials; asbestos cellular and sponge-felted pipe insulation; insulating sheets and blocks; asbestos brake linings and clutch facings (woven on special looms); and asbestos packings for steam, oil and hydraulic operations.