

Valley and Wainwright oil fields. Oil has also been struck in the Devonian rocks north of Norman on the Mackenzie river. Gypsum is obtained from the Palæozoic rocks of Manitoba.

Western Cordillera.—In the western Cordillera is a fairly complete succession of sediments of Precambrian, Palæozoic, Mesozoic and Tertiary age.

The mountains to the west of the Rocky Mountain trench in southern British Columbia are composed of a series of late Precambrian quartzites, slates and magnesian limestones of great thickness. The area underlain by these widens near the international boundary and extends east beyond the Rocky Mountain trench and west beyond the Kootenay Lake valley. On Kootenay lake there is a series of mica schists, quartzites and crystalline limestones penetrated by pegmatites and other plutonic rocks of Mesozoic age. This is the Shuswap series, which may belong to the early Precambrian or be an altered phase of the late Precambrian. On the west shore of the lake the series grades upward into less altered rocks. These are overlain by sediments of Carboniferous age which extend northward to the main line of the Canadian Pacific railway. The Shuswap series extends from east of Revelstoke to Shuswap lake and northward to the headwaters of Fraser river. In places they are much altered and associated with intrusive rocks. Gneissic and schistose rocks, probably of the same age, are found on Finlay and Omineca rivers. Quartzites, mica schists and crystalline limestone with interbands and broad areas of schists of various kinds and intrusive granite gneiss are found over a wide stretch of the Yukon plateau. Slates, quartzites and conglomerates, also probably of Precambrian age, occur on the northern part of the Alaska-Yukon boundary, in the Ogilvie range and in the Klwane district.

The Rocky mountains consist of a series of great fault blocks in which an enormous thickness of Palæozoic and Mesozoic sediments is exposed. Many thrusts of great extent have resulted in an over-riding of the Mesozoic sediments by the Palæozoic, and the erosion of the softer strata of the former has produced longitudinal valleys between the harder Palæozoic blocks. The Palæozoic formations consist mainly of limestones with less amounts of sandstone and shale. A succession with few breaks from the Cambrian through the Ordovician, Silurian, Devonian and Carboniferous is found, and probably extends with certain deviations throughout the length of the Rocky mountains and Mackenzie mountains. Between the Cambrian and Precambrian beds there is apparently little angular unconformity, but the variation horizontally in the Precambrian strata on which the Cambrian formations rest and a similar variation in the ages of the over-lying Cambrian strata furnish evidence of a long period of erosion.

The Mesozoic strata consist of soft shales and sandstones some of which are coal bearing. Strata of Triassic, Jurassic and Cretaceous age are represented.

On the interior plateau of British Columbia, limestones, quartzites and argillites of Carboniferous age and known as the Cache Creek group are of wide distribution. These are succeeded upwards by argillites and limestones and a great mass of volcanic intrusives and effusives of Triassic age, and these are succeeded by sediments and volcanics of Jurassic age. The Triassic and Jurassic formations are widely distributed, are found on the islands to the west, and some at least extend into the Yukon.

Formations of Cretaceous age are found on Vancouver and Queen Charlotte islands and in a belt extending up the Fraser and along the eastern edge of the Coast range into the Skeena valley. They are mainly formations of continental origin and carry coal seams, but also include sediments of marine origin and volcanics.