The Cordilleran region was Canada's leading producer of minerals until mining in the Shield took the lead about the turn of the century. Notwithstanding greatly increased production in British Columbia, the Cordilleran region now produces only some 7 p.c. of the Canadian total because of the greatly expanded production of metals from the Shield and the value of oil and gas from the Great Plains. Metal mining in the Cordillera is and has been almost entirely in the Western Cordillera, but important quantities of coal and structural materials are obtained from the Eastern Cordillera, and much oil was produced from the Foothills in Alberta, chiefly at Turner Valley.

Broadly speaking, all parts of the Western Cordillera except those covered by Tertiary lavas or sediments are favourable for the occurrence of metals. Numerous occurrences of many kinds have been found, most having been formed directly or indirectly as a result of the Nevadan orogeny, although some mineralization attended the early Tertiary disturbances and some may have taken place before the Nevadan. British Columbia contains many large and moderate sized mines of lead, copper, zinc, gold, silver and iron, mainly along the flanks of the belt of Coast Intrusions and in the southern part of the province, where the Sullivan mine is the largest lead-zinc-silver operation in Canada and one of the largest in the world. British Columbia also contains rich mercury and tungsten mines that are now inactive because of reduced demands for these metals, and an asbestos deposit of exceptional quality which is now being mined. Barite, gypsum and structural materials are produced and extensive coalfields are available although the production of coal has declined. Yukon Territory also contains diversified mineral deposits, but mining at present is limited to rich silver-lead-zinc veins at Mayo, the waning placers of the Klondike, and coal extracted for local use.

The Appalachian Region.—This region is the northern continuation of a long belt of folded strata extending along the eastern side of the United States. It is on the site of a geosyncline that existed mainly in Palæozoic time in which great thicknesses of sedimentary and volcanic strata were laid down. The northwestern boundary of the region is a long curving fault or zone of faults which extends from Lake Champlain at least as far as the Gulf of St. Lawrence and which causes the curved shape of the northern coast of Gaspe. The strata in the Appalachians have been folded and faulted by successive periods of orogeny along axes that strike northeasterly; thus strata of different kinds and ages and belts of intrusive rocks form northeasterly-trending bands, many of which are responsible for the peninsulas, bays and ridges of the region. Three principal periods of orogeny, called the Taconic, the Acadian and the Appalachian, have been recognized. The Taconic occurred at the close of the Ordovician, the Acadian during the Devonian, and the Appalachian at the close of the Palæozoic. In Canada the Taconic disturbances were fairly widespread, the Acadian were more so, affecting areas that were previously affected by the Taconic and areas that were not, but the Appalachian orogeny, which was a major feature in parts of the United States, was of minor and local importance.

Precambrian rocks of Grenville types exposed in parts of western Newfoundland probably represent an extension of the Shield but are separated from it by younger strata along the Strait of Belle Isle. Less deformed strata, including quartzite, slate and other rocks in eastern Newfoundland and in parts of Nova Scotia and New Brunswick, bear a general resemblance to Proterozoic strata of the Shield. They are overlain unconformably by Palæozoic strata deposited intermittently from Cambrian to Pennsylvanian times. In much of the region, deposition apparently took place in local basins, strata of the same ages varying widely in kind and in their contained fossils. The rocks are largely limestone, shale, sandstone and volcanic rocks, some of the formations being of great thickness. For example, the greatest thickness of Middle Silurian beds in North America—8,427 feet of sedimentary and 4,626 feet of volcanic strata—is exposed near Chaleur Bay. Near the Bay of Fundy, Triassic sandstone with interbedded volcanic strata similar to those of the Hudson River Palisade in New York represent the youngest rocks of the Appalachian Region.