

In latest Tertiary and Pleistocene times, some uplift and minor volcanic deposition occurred in the Western and Interior Systems. Very recent, post-glacial volcanic activity is represented by several well-preserved cinder cones in north, southwest and central British Columbia.

Glaciation, as in other parts of Canada, was widespread in the Cordillera during the Pleistocene Epoch, and glaciers persist today in many mountain systems, chiefly in the St. Elias and Coast Mountains and the Columbia Ice Field in the Rockies. A large part of the Yukon Territory, however, escaped Pleistocene glaciation because the high St. Elias Mountains barred moisture-laden winds from the Pacific to such an extent that ice did not accumulate in parts of the interior, despite the depressed temperatures of the time. This lack of glaciation was largely responsible for the preservation of the Klondike placer gold deposits.

The Cordilleran region has long been an important producer of economic minerals. Coal mining thrived over 100 years ago at Nanaimo on Vancouver Island and the gold rushes to the Klondike and Cariboo-Fraser Rivers regions resulted in the economic development of the Yukon and the interior of British Columbia. Present mineral production for the Cordillera is approximately one tenth of the Canadian total.

All parts of the Western and Interior Systems, except those covered by Tertiary plateau lavas and sediments, are favourable for the occurrence of metals. Metal occurrences are very minor in the Eastern System but appreciable amounts of oil and natural gas are found, mainly in the foothills.

Many of the metallic mineral deposits are related to granitic intrusions of the Jurassic to Tertiary intrusive cycle but others may have been present before the cycle and some were probably metamorphosed by the intrusions. Copper, gold, molybdenum and iron are the main metals produced in the Western System and western portions of the Interior System, whereas lead, zinc and silver are most important in the eastern parts of the Interior System. The ores in general are complex and a single mine may supply gold, silver, copper, lead and zinc.

The lead-zinc-silver mines of the eastern part of the Interior System in the Kootenay and Slocan districts of southeast British Columbia occur in Precambrian and lower Palæozoic sedimentary rocks. The Precambrian Sullivan orebody of the Kootenay district is one of the largest lead-zinc-silver deposits in the world. Another large producing area is at Mayo in the Yukon Territory. Cadmium, antimony and bismuth are recovered from many of the lead-zinc-silver ores.

Most copper ores of the region are large low-grade sulphide deposits related to Mesozoic or Tertiary granitic bodies. These include the Bethlehem deposits at Highland Valley, British Columbia, the Britannia mine near Vancouver, and several deposits that will soon be mined in the Smithers, Stewart and Stikine areas of the northern part of the province. Many of these mines contain recoverable molybdenum. High-grade skarn copper deposits occur at Merritt in the interior of British Columbia and on Vancouver Island.

Owing to intense mineral exploration in recent years, British Columbia has become a major producer of molybdenum. Large deposits at Endako and a smaller high-grade deposit at Boss Mountain are at present being mined. They are related to Mesozoic batholiths. Other promising large deposits are undergoing exploration or development.

The gold-quartz veins of British Columbia appear to have been derived from Mesozoic and Tertiary batholiths. Only two deposits of this type are at present being mined and most gold produced in the Cordillera is derived as a by-product of copper, iron and lead-zinc mining. The rich placer deposits that sparked the beginning of the mining industry in the Cordillera are of minor modern importance.

Iron deposits containing magnetite are being mined on Vancouver Island, the Queen Charlotte Islands and Texada Island. They occur in skarn zones along the contacts between granitic intrusions and Triassic limestone. Precambrian sedimentary iron deposits in the Yukon Territory may be developed in the future.