

Very early Tertiary times were characterized by widespread orogenic disturbances in the Cordillera. The Rocky mountains were formed and there was much folding and faulting in places in the interior, followed by intense erosion. Tertiary sediments, partly of continental deposition with seams of lignite and partly of marine deposition, occur at many points throughout the interior of the Cordillera and on Vancouver island. Lava flows capping some of these sediments cover broad stretches of the interior plateau.

In Pleistocene time nearly the whole of the Cordillera with the exception of a large area in Yukon was subjected to glaciation, and glaciation still persists in the mountainous regions. Volcanics of recent age are found in areas of limited extent.

An episode of great economic importance in the geological history of the West was the intrusion of the granitic rocks of the Coast Range batholith and of acid rocks at different points in the interior, particularly in the southern part of British Columbia in Mesozoic times. Many of the more important mineral deposits of British Columbia, such as the copper deposits of Hidden Creek, Britannia, and Allenby mountain, the gold-silver deposits of Salmon River district and the silver-lead deposits of the Slocan, had their origin in solutions given off by the magmas of these acid intrusives.

The lead-zinc deposit of the Sullivan mine lies in sedimentary rocks of Precambrian age. The Cretaceous and Tertiary formations carry seams of coal and lignite of great importance. There are economic deposits of other minerals in great variety throughout the Cordillera, and British Columbia is one of the leading mineral-producing provinces of Canada. The gold of the once famous Klondike region was found in placers of an unglaciated area and the gold of the Cariboo district occurs mainly in Tertiary placers that were unaffected or little affected by glaciation.

## 2.—Economic Geology of Canada, 1926.<sup>1</sup>

The purpose of this paper is to call attention to the most important reports and articles treating of the economic geology of Canada and published during 1926. The particular articles here referred to, although recently published, do not necessarily contain the best and most complete information on the subjects treated; for further information it is advisable to consult the Dominion and Provincial Departments of Mines. The reference numbers appearing through the text indicate the publishers as listed at the end of this paper.

**Bituminous Sand.**—In a report entitled "Bituminous Sands of Northern Alberta," S. C. Ellis<sup>2</sup> describes the bituminous sands exposed on Athabaska river and its tributaries, which because of their unusual character and great extent have attracted the attention of explorers and geologists for more than a century. The formation is a Cretaceous sandstone unevenly impregnated with bituminous matter, the origin of which is not known.

A careful consideration of the commercial possibilities of the bituminous sands as such and of the hydrocarbons that might be extracted therefrom is presented. It has been demonstrated that the sands are suitable for street paving. So far as the writer is aware, however, no successful process for the commercial recovery of the hydrocarbons has yet been evolved. Certain processes appear to possess real merit. Descriptions of various processes are presented and methods of prospecting and mining are described.

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