producing districts of the world. The greatest proportion of the surface deposits is derived from these underlying rocks. Some large stretches of the region, however, were submerged by glacial lakes in which fine silts and clays, carried down from the surrounding land and introduced by glacial streams, were deposited. Such is the very fertile Red River valley. This is a part of the bed of a great lake that extended from the Laurentian plateau west to the Manitoba escarpment; it reached southward into the United States and northward 100 miles beyond lake Winnipeg.

The sedimentary rocks which underlie the greater part of the Interior Plain are chiefly of Cretaceous age and contain coal, building stones, clays, some of them high grade, and cement materials. Natural gas over wide areas and under great pressure has been tapped in northern Alberta, and some oil has been encountered in the southwest. The lower sandstones of the Cretaceous along the Athabaska river, where they come to the surface, are for miles saturated with bitumen. These tar sands will probably average 12 p. c. in maltha or asphaltum. Recent prospecting has discovered oil at Pouce Coupé on the Peace river, and at Fort Norman, on the Mackenzie river, near the Arctic circle. At other points in the Devonian rocks of the Mackenzie basin oil indications occur. The lignites of the eastern plains are useful for local purposes, and highly bituminized coals are found as the mountains are approached. Vast areas are underlain by lignite beds in Saskatchewan and Alberta, and the reserves of bituminous coal in Alberta are enormous. Gold is found in a number of the rivers coming from the mountains. Gypsum is quarried in Manitoba and important deposits also occur in northern Alberta. Beds of salt have been discovered by drilling near McMurray, northern Alberta.

Cordilleran Region.—The Cordilleran belt in South America, in Mexico, and in the western States, is recognized as one of the greatest mining regions of the world, noted principally for its wealth in gold, silver, copper and lead. The Cordilleras stand unparalleled in the world for the continuity, extent and variety of their mineral resources. In Canada and in Alaska this belt maintains its reputation, although in both, for the greater part, it is unprospected. In Canada the belt has a length of 1,300 miles and a width of 400 miles. It is pre-eminently a great mining region. Its rocks range from the oldest formations to the youngest; vulcanism and mountain building processes have repeatedly been active. The chief products of its lode mines in Canada are copper, gold, silver, lead and zinc. The Yukon territory is noted for its production of placer gold and is now attracting attention with rich silver ores. In addition to these minerals there are, within the same region, enormous resources of coal of excellent quality, varying from lignite to anthracite, and conveniently distributed.

The surface of the region is generally mountainous, though the interior section is reduced to an elevated plateau. Agricultural pursuits are therefore limited to the valleys. In these there are numerous terraces composed of silt carried down by streams issuing from former glaciers, the latter acting as eroding agents on the underlying rocks. These valley deposits are fertile and are well adapted to fruit culture.

III.—SEISMOLOGY IN CANADA[1].

Seismology—the branch of science which treats of earthquakes—has received considerable attention in Canada during recent years. It has been generally recognized that earthquakes are frequent in regions of adjustment of strata and are characteristic of the newer mountain and coast regions where abrupt changes

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