

Lignite has been found in the Mesozoic rocks of Moose River. The possibility of finding oil in the Palæozoic strata of the Lowland has been considered, but the probability is that the formations are too thin and lack the structure necessary for the accumulation of oil.

The Interior Plains.—The Interior Plains Region of Canada is part of a great plains region in the interior of the continent stretching from the Gulf of Mexico to the Arctic Ocean. Throughout most of the area the underlying Palæozoic, Mesozoic and Tertiary rocks are nearly flat-lying. In the northwestern part of the area, however, the Franklin range, which lies between Great Bear Lake and Mackenzie River, is composed of folded strata. In western Alberta, also, the rocks are folded and faulted.

The Interior Plains Region may be divided geologically into three zones. A narrow plain on the east, known as the Manitoba Lowland, is developed on flat-lying Palæozoic strata ranging in age from Ordovician to Devonian. These rocks lap over the Canadian Shield and commonly present a low escarpment at their border. In the north this zone broadens to form the great Mackenzie Lowland where, over wide areas, Silurian strata form the base of the Palæozoic section. In the Mackenzie Lowland, Cambrian and Ordovician rocks occur in several places also and over considerable areas strata of Cretaceous age occur as, for example, on Liard River, on the western shores of Great Bear Lake, and at several places along the Mackenzie River. At the mouth of Bear River is an area covered by partly consolidated Tertiary sands and clay carrying lignite beds. The second division is a wide belt underlain by Cretaceous rocks. Its eastern border, where these rocks overlap the Palæozoic sediments, is rather an abrupt rise known as the Manitoba escarpment. From elevations of 1,000 to 2,000 feet on this flank the surface rises gradually westward until, at the border of the mountains, the elevations are between 4,000 and 5,000 feet. The third division consists of plateaux of flat-lying Tertiary rocks at Wood Mountain and Cypress Hills, rising to elevations up to 1,000 feet above the level of the surrounding region.

In Pleistocene time glacial drift was widely scattered over the region. On the retreat of the ice, clay accumulated in lakes which were left in front of the waning ice-sheet. Much of southern Manitoba formed the bed of glacial lake Agassiz.

The chief mineral resources of the Interior Plains are coal and natural gas. The oil area of Turner Valley is, partly at least, in the Foothills Belt of the Cordilleran Region to the west and this oil area is therefore dealt with in the section on that Region. The boundary between the Cordilleran Region and the Interior Plains is poorly defined as there is no geological boundary and as the foothills, which are part of the Cordillera, grade imperceptibly into the plains. About 31 p.c. of the coal produced in Canada and about 28 p.c. of the natural gas comes from the Interior Plains area.

The coal deposits of the Interior Plains are in rocks of Upper Cretaceous and Lower Tertiary ages. The coal seams are in beds lying parallel to the enclosing strata. Practically all the coal mined is lignite.

Oil wells near Norman, N.W.T., produce from a horizon near the top of the Devonian. The limits of the Norman oil field have not been determined. Oil is also produced in small quantity from wells in the Wainwright, Red Coulee and Tabor areas and in these places the oil horizon is at or near the base of the Cretaceous.

The gas produced in the Plains area comes mainly from horizons near the base of the Upper Cretaceous, and near the base of the Lower Cretaceous. As the geology