

sedimentary rocks were laid down after the last known period of widespread mineralization in Canada, they may be excluded as promising sources of metalliferous deposits. Such rocks, however, may still be considered as possible sources of coal, oil or gas.

Much or all of the Eastern Arctic was glaciated during the last Ice Age which covered most of Canada with ice several thousands of feet thick. This ice sheet had some of its centres and perhaps its main source of origin in the Eastern Arctic. Areas of permanent ice-caps, glaciers, or snowfields still cover several large sections of Ellesmere Island, much of Devon and Bylot Islands, and scattered areas along northeast Baffin Island. Such areas are thus excluded from any hopes for present economic development.

When the ice load decreased at the end of the Ice Age the land slowly began to rise. Ancient beach ridges and terraces, now found over 500 feet above the present water-level, have recorded this rise for geologists. Except in the mountainous areas, most of the present surface which was exposed after the ice melted back is subdued glacial topography. Bare, rounded hills of rock are separated by broad, drift-filled valleys. Post glacial frost action has caused disintegration of the exposed rock covering the surface with loose frost-riven debris.

Topography.—The region west of Hudson Bay is one of countless lakes and streams. Although there are no extensive areas of high relief, local rugged sections are to be found. In general the region consists of an interior plateau area where altitudes average about 1,000 feet, and an emerging coastal plain, covered by glacial drift, which slopes towards Hudson Bay and the Arctic Coast. The rolling plateau surface is marked by linear rock ridges which give it a furrowed appearance. Long, narrow lakes often occupy the intervening valleys.

The plain along the west coast is about 50 miles wide at Churchill and broadens northward to extend as far inland as Yathkyed and Baker Lakes. North of Chesterfield Inlet the country is more rugged, but gradually slopes down towards the broad, sandy valley of Back River to the west, and on the east, to a low, monotonous coast along Roes Welcome Sound. Melville Peninsula is a plateau area with a steep-sided west coast and a shelving, terraced area along the central and northern sections of the east coast. In winter, travel is fairly easy by dog team across the frozen, snow-covered surface of the low areas west of Hudson Bay, but in summer the myriads of lakes, swamps, and intervening spongy muskeg confine travel chiefly to the main rivers.

The permanently frozen ground of the Eastern Arctic prevents underground drainage, so that lakes collect in low areas and spill uncertainly from one to another. This and the disruptive effects of glaciation on drainage have combined to cause a poorly integrated drainage system. The three major rivers, Kazan, Dubawnt, and Thelon, which cut across the inner plateau, flowing northeastward at right angles to a general alignment of the bare, rocky ridges, finally empty into Baker Lake. All three rivers broaden out into lakes at several places along their courses. These rivers have been the routes of early explorations, and are fairly well mapped, but actually from the air they may be very difficult to pick out from the numerous un-mapped lakes and rivers that surround them.

Southampton Island has two distinct physiographic regions. The larger part, southwest of a line drawn roughly from Duke of York Bay in the north to South Bay and Seahorse Point, is low, flat limestone country. Sloping terraces that