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INTRODUCTION.

GENERAL DESCRIPTION OF THE REGION.

The apatite region of Ottawa county comprises the area included between the lower portions of the Du Lievre and Gatineau rivers. The chief mining districts occur in Portland and Templeton townships, but deposits of greater or less extent are found over nearly the whole of the area.

The region lies upon the southern flank of the Laurentian axis, and is characterized in large part by a somewhat rugged topography. For some distance north of the Ottawa river, the surface is comparatively level, but this feature gradually gives place to hills which rise to a height of from 500 to 700 feet above the level of the adjacent rivers. The hills are covered with a meager soil, and the forest growth, originally limited, has been largely swept away by fires. The region is drained chiefly by the two rivers mentioned above, which flow southward into the Ottawa river. These streams are of considerable size, have swift currents, and rapids frequently occur. Waterfalls also constitute a picturesque feature of these streams. High falls, on the Du Lievre, has a descent of about 100 feet.

The country between the streams is dotted with numerous lakes, which drain through small streams with tortuous courses into the Du Lievre or the Gatineau, or southward into the Ottawa. These lakes are extremely irregular in shape, with sharply sinuous shorelines, and often contain small islands.

GEOLOGY OF THE REGION.

*Character and classification of the rocks.*—In order to arrive at a proper understanding of the nature and occurrence of the ellipsoidal syenite-gneiss or leopard rock, it is necessary to introduce a brief description of the geology of the region. The facts upon which this description is based have been obtained chiefly from the reports of the Canadian Geological and Natural History Survey.\*

\* We are indebted chiefly to the reports of Vennor and Harrington, and to Professor F. D. Adams' account of the typical Laurentian area in the *Journal of Geology*, vol. 1, No. 4, 1893, pp. 325-340. The map here given was taken from that accompanying H. G. Vennor's report in the *Annual Report* for 1878.

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