

## PREFACE.

The following report gives the more important results of a survey along the Canadian Pacific railway between Golden and Kamloops, B.C., a distance of 224 miles. The writer was commissioned to work on the general geology of this long section during the summers of 1911 and 1912. A principal aim was to collect data for the guide book to be used in the 1913 session of the International Geological Congress. The actual area thus covered in reconnaissance is about 1,400 square miles. For certain problems connected with stratigraphy and structure it was found necessary to travel considerable distances from the railway. Adams lake, the northern arm of the Shuswap lakes, and the heights of the Dogtooth mountains and Prairie hills between Donald and Bear Creek, were thus for special reasons explored.

Efficient assistance in the field was given by Dr. N. L. Bowen during the first season, and by Mr. F. J. Alcock during the second. Special thanks are due to Mr. Howard Palmer for the use of many of his valuable photographs taken in the Selkirks; to Dr. E. Deville for permission to publish the Wheeler photographs; and to the Canadian Pacific Railway company for the gift of a number of their official photographs.

The base maps used in the field were: the Kamloops and Shuswap sheets of this Survey, respectively published in 1895 and 1898, on the scale of 1: 253,440; A. O. Wheeler's map of the Selkirks, published by the Interior Department of Canada, 1904, on the scale of 1: 60,000 (four sheets); and his topographical map of part of the Rocky mountains, in four sheets (scale 1: 160,000), kindly furnished in blue print form, prior to publication, by the Surveyor General, Dr. E. Deville.

Preliminary statements of the results have been given in the Summary Reports of the Survey for 1911 and 1912, and in Guide book No. 8 referring to the Transcontinental Excursion C1 of the Congrès Géologique Internationale (issued by this Survey in August, 1913).

Nearly nine-tenths of the area traversed shows outcrops older than the Olenellus zone of the Cambrian. Younger rocks appear at the extreme eastern end and extreme western end of