The Geological Survey is indebted to Mr. H. Bauerman for the privilege of publishing his report on the geology of the country near the 49th parallel west of the Rocky Mountains. This report, though prepared by Mr. Bauerman in connection with the Boundary Commission Expedition of 1859-1861, has never been printed, which accounts for the fact that no reference has been made to it in the reports of the Geological Survey on British Columbia, the first of which appears in the Report of Progress for 1871-72. The western portion of the country in the vicinity of the 49th parallel, described by Mr. Bauerman, is included in the area of the map accompanying my report of 1877. and while some pages of Mr. Bauerman's report, such as those describing the travelled route from Hope to Vermilion Forks and the valley of the Similkameen, refer to lines examined by me and described in 1877, it has been thought best, on account of the priority of his observations, to print Mr. Bauerman's report in its entirety. Even in this western portion of the country, however, Mr. Bauerman gained access, by means of trails cut by the Commission, to many points in the immediate vicinity of the boundary-line, which have since been practically inaccessible; and if his report had been available at the time of the publication of the map above referred to, it would have enabled the geological boundaries along its southern edge to have been drawn with eonsiderably greater accuracy.

The report is here printed almost exactly as prepared by Mr. Bauerman, though, with his permission, a few alterations and corrections in names of places, distances, etc., have been made. The bearing of the more recent systematic observations on the geology are indicated, where it appears desirable, in foot-notes. In reproducing Mr. Bauerman's sections, his originals have been exactly followed in the outlines and accompanying notes, but the colouring has been changed so as to conform to that adopted on the adjacent maps already published by the Geological Survey. This change also enables the Cretaceous and Tertiary age of parts of the series,—points rendered evident by the subsequent examination of the country to the north of the 49th parallel—to be brought out clearly. In addition to the study of Mr. Bauerman's report, it may be added. that the writer has had the opportunity of examining his original suite of specimens, now in the museum of the Geological Society of London, which has facilitated the exact correlation of the rocks referred to by him with those described in the reports of the Geological Survey.

GEORGE M. DAWSON.