

PREFACE.

end of that year, they covered about 2,000 square miles. In the same year, an International Boundary Commission was appointed to examine the country along the boundary between Canada and the United States Territory of Alaska. The Canadian Commissioner, Mr. W. F. King, decided to carry out his share of the work by photography. In 1893 and 1894, his parties surveyed about 14,000 square miles.

Irrigation surveys were commenced last year in the south-westerly part of the North-west Territories, where the rainfall is not quite sufficient for agricultural purposes. In addition to the gauging of streams, the establishment of bench marks, etc., it is necessary to ascertain the catchment areas and to define the sites best adapted for reservoirs. For this purpose photography has again been resorted to in the foot hills and on the eastern slope of the mountains. It has, in this case, a peculiar advantage. Whether or not a site is a favourable one for a reservoir cannot be known until the plan has been partly plotted. It must be possible to bring water to the proposed place and to run it off; the capacity must also be adequate. If favourable, a detailed survey of the site is required. With the ordinary surveying instruments, a preliminary survey has to be made; if, after plotting it, the site is found favourable, the topographer has to go over the ground a second time to make a detailed survey. Or, the whole of the work may be executed at once, with the contingency that the detailed survey may turn out useless. With the camera, the plan may be plotted so far, and so far only, as required; the photographs which furnish a general plan, can be made to give all the detail wanted without going again into the field. Whether the site is a good one or not, there is no labour wasted.

Notwithstanding the many publications on photographic surveying, the great advantages assigned to it and the numerous experimental surveys executed, it has not yet come into general use; in many quarters there is still an adverse feeling against it. There is such a fascinating simplicity about the method that it is at first difficult to understand the reasons which prevent its adoption. Can anything more convenient be conceived than a method which enables a topographer to gather rapidly on the ground the material for his maps and to construct them afterwards at leisure in his office? In the first edition of this book, I endeavoured to explain this anomaly. The large scales of