INTRODUCTION.

This volume is the fifth of a series that includes Bulletins 316, 341, 381, and 431, "Contributions to economic geology (Part II)" for 1906, 1907, 1908, and 1909, respectively. Previous to 1906 the annual "Contributions" consisted of one part only and papers on mineral fuels were included with the papers on metals and nonmetals except fuels in a single volume. These earlier volumes are Bulletins 213, 225, 260, and 285, for 1902, 1903, 1904, and 1905, respectively.

As the subtitle indicates, the papers included are of two classes: (1) Short papers giving comparatively detailed descriptions of occurrences that have economic interest but are not of sufficient importance to warrant a more extended description; (2) preliminary reports on economic investigations, the results of which are to be published later in more detailed form. These papers are such only as have a direct economic bearing, all topics of purely scientific interest being excluded. They have been grouped according to subjects or general regions and each group has been issued as an advance chapter as soon as it was ready.

Brief abstracts of the Survey's publications of the year are given in the annual report of the Director. The complete list of Survey publications affords, by means of finding lists of subjects and of authors, further aid in ascertaining the extent of the Survey's work in economic geology.