

CHAPTER III

THE MAPS

SECTION I.—COMPILATION OF MAPS

The preparation of the present maps was commenced in 1916, after a brief visit paid by me to the Trigonometrical Survey Office, Dehra Dūn, on my return from the third expedition in March of that year, had allowed the main lines of the work to be settled with the approval of the Surveyor General. My deputation to England immediately thereafter for work on the archæological results of my journeys prevented me from being consulted with regard to details, while the work of compilation was being pushed on in 1916-17 with commendable rapidity under the direction of Colonels G. A. Beazeley, H. H. Turner and R. A. Wauhope, R.E., successively in charge of No. 2 Drawing Office. Notwithstanding the serious difficulties arising from war conditions it had by the close of 1916, progressed sufficiently far to permit the fair drawing of certain sheets to be begun. My return to India in the autumn of 1917 fortunately rendered it possible for me to revise each sheet in the original drawing and subsequently to pass it in proofs through the successive stages of reproduction.

The magnitude of the work involved is indicated by the fact that the section of No. 2 Drawing Office engaged on these maps during the years 1917-19 comprised on the average fifteen draftsmen under the supervision of one officer of the Provincial Service and of two of the Upper Subordinate Service. The assistance of R. B. Lāl Singh was assured from the start until his retirement in August, 1919, and his personal knowledge of much of the ground proved of great value. Similarly very helpful was the continued supervision of the drawing work by M. Karīm Bakhsh, Head Draftsman, who since 1901 had taken a share in the cartographical work resulting from our surveys. The drawing and reproduction work was not completed until 1922, having been carried on since the spring of 1919 under the direction of Major F. J. M. King, R.E., in joint charge of No. 2 Drawing and Photo-Zinco Offices, Dehra Dūn, to whose constant care the technical execution of the maps owes much.

The main basis for the compilation of the maps was provided by the series of triangulations and of astronomically observed latitudes brought back from the three journeys and worked up by the Computing Office, Dehra Dūn. In Appendix A, Major K. MASON, M.C., R.E., has been kind enough to record a summary of needful information concerning the character and extent of the several triangulation series and the methods of computation employed, together with a list of latitudes, longitudes, and heights for all triangulation stations and points. There, too, an explanation has been furnished of the circumstances which at the time of compilation caused some stations and points derived from R. B. Lāl Singh's triangulation on the third journey to be inserted in the maps with values different from those which were finally adopted in 1921 after careful re-consideration of the computation work. The whole of the triangulation of the three journeys has been shown in a series of charts accompanying Major Mason's Appendix.

A complete list of astronomically determined latitudes will be found in the *Notes* of Chapter IV dealing separately with each sheet. There, too, I have furnished a summary of the information which the Drawing Office has recorded as to the methods and materials used in the compilation of each sheet. Special mention has been made there of all instances where it had been considered advisable in the compilation to utilize latitudes and longitudes of particular places derived from the observations of other travellers or in some cases taken from previously published maps. Among such extraneous materials the following deserve special mention; the series of chronometrically determined longitudes which Mr. C. Clementi obtained on his