

(F)—FROM ACHCHAN TO KAPA, 1906-08 (*RĀM SINGH*)(i). (*Vide* charts 60H, and L)

A base was measured near Achchan with a subtense bar, and the latitude and azimuth observed astronomically. The position of 'C' h. s. was directly computed relatively to the extremities of this base. The latitude of 'C' being thus determined, its longitude was derived from observations at it to Pks. 1 and 2/60L previously fixed by Captain Deasy. Identification of the peaks was roughly checked by the two latitude results at 'C', which differed by 50 seconds from Deasy's value. The value derived from the astronomical observations has been accepted.

With the exception of stations 'G', 'J' and 'M', which were fixed by resection, the triangulation connexion to 'O' h. s. is continuous, straightforward and reliable.

(ii). (*Vide* charts 69C, D, G, and K)

The connexion between 'P' and 'O' h. s. was distant and unreliable, and has been obtained as follows. This link is weak.

At 'S' h. s. the latitude and azimuth to Pk. 2/69D (of Deasy) were observed astronomically and the distance computed. An azimuth was also taken to Pk. 38/60L and from these two peaks the longitude of 'S' was derived. It was found that these values differed by about 8 *minutes*. The longitude of Pk. 2/69D of Deasy was based on two chronometer observations, which were not in accordance, and which differed by some 15 minutes of arc: it was therefore decided that though Pk. 38/60L is a far more distant peak, the longitude derived from it is in all probability much the more accurate, and this value has been accepted. 'S' h. s., being now in terms of the triangulation previously computed, the positions of the stations in its neighbourhood, of 'P' h. s., and of 'T', 'U' and 'V', were directly derived from it, with the exception of the last named, which was fixed by resection.

(iii). A rough check for latitude was furnished by Rām Singh's observations. In 1900-01 he observed an astronomical latitude at the village of Niya. His value is  $37^{\circ} 4' 13''$ . This station is roughly a furlong north of a triangulation station of his work in 1906-08, which he fixed by resection from Pks. 28, 35, 38/60L and for which he obtained a latitude of  $37^{\circ} 3' 34''$ .

(G)—ON THE HEADWATERS OF THE YURUNG-KĀSH, 1908 (*LĀL SINGH*)(*Vide* charts 61A, and E)

Towards the close of Sir Aurel Stein's second expedition, a little triangulation was effected by R. B. Lāl Singh on the upper Yurung-kāsh. At only three stations were the observations sufficient to determine their positions by resection:

Seghizköl, 'A' h. s., was fixed by observations to Pks. 4, 25 and 31/61E, previously fixed by Captain Deasy.

Zailik, 'D' h. s., was similarly fixed with reference to Pk. 1/61A, of the G. T. Survey, Pk. 2/61A, of Rām Singh's previous work, and Pk. 8/61A of Captain Deasy.

Tār-köl, 'E' h. s., was fixed by observations to Pk. 8/61A, and Pks. 4 and 6/61E of Deasy.

The heights of these stations derived from the mean of two observations are very discordant, the differences being 194 feet, 748 feet, and 924 feet respectively. These discrepancies throw great doubt on the observations and the positions laid down for them should be treated with suspicion.

(H) and (I)—KAPA TO KORLA, 1913-15 (*LĀL SINGH*)

1. *General*.—The triangulation is considered in two sections, firstly, (H), from Kapa *via* Charkhlik to Pk. 1/75E, (*i. e.* from latitude  $37^{\circ} 20'$ , longitude  $85^{\circ} 35\frac{1}{2}'$ , to latitude  $39^{\circ} 0'$ , longitude  $89^{\circ} 47'$ ); and secondly, (I), from Āstin-bulak, (latitude  $40^{\circ} 47'$ , longitude  $90^{\circ} 19'$ ) to Korla ( $41^{\circ} 44' 20'' \cdot 8$ ,  $86^{\circ} 10' 10'' \cdot 4$ ). The sections each comprise about 300 miles of work and are separated by the Lop desert.