

somewhat in excess of the true ones. This easterly shift increases from about 1 minute in the case of the Toghrak-chap base stations to about 5' 10" in that of Peak 1/75 E (13,170; D. 2), the easternmost of the triangulated points. For the correct longitudes, see Appendix A (Sheets 75 A, B, E, F).

The longitude adopted for Charkhlik ( $88^{\circ} 2' 10''$ ) is the mean between Dr. Hedin's value and that shown by R.B. Lāl Singh's plane-table work ( $88^{\circ} 1'$ ). The longitudes adopted for Mīrān and Abdal are derived from traverses connected with triangulated points at the debouchure of the Mīrān river. The routes leading to the Lou-lan Site and Tikenlik are adjusted on the positions adopted for these places, and that along the southern shore of Lop-nōr on the position of Kum-kuduk (see Sheet No. 32). Besides the latitude observations shown below, a number of others along the Tārīm river were used from Dr. Hedin's work.

Descriptive accounts of the routes followed by me in 1906-07 and of the archaeologically important ground near Mīrān are given in *Desert Cathay*, i. pp. 343 sqq., 427 sqq., 438 sqq., 503 sqq. The historical

*Astronomically observed latitudes.*

1906-08 Donglik, Camp 142 (near spring; C. 2)	...	...	$39^{\circ} 22' 51''$
1913-15 Charkhlik, Camp 20 (Bēg's house; N. of Bāzār; A. 2)	...	...	$39^{\circ} 1' 35''$
Toghrak-chap, Camp 22 (E. end of base, on E. bank of Nullah;			
B. 3) ...	...	...	$38^{\circ} 57' 9''$
Camp 24, S. of Mīrān (on east bank of Mīrān river; B. 2)	...	...	$39^{\circ} 12' 12''$
Khunugu, Camp 27 (on east bank of river; D. 2) ...	...	...	$39^{\circ} 10' 22''$
Mīrān, Camp 63 (within hamlet; B. 2)	...	...	$39^{\circ} 15' 54''$

NOTES ON SHEET No. 31 (PICHAN, CHIK-TAM)

The surveys represented in this sheet lay partly along both slopes of the T'ien-shan and partly in the westernmost portion of the Turfān basin (Pichan) and the desert plateaus to the east and south of it. With the exception of the high-road from Hāmi to Turfān followed in 1907, all the routes surveyed belong to 1914-15.

For the work shown north of latitude

<sup>16</sup> The early Chinese record discussed in the last quoted passage is of special geographical interest for the so called 'Lop-nōr problem', as it conclusively proves that at the very period when the ancient Lou-lan territory in the north still received water from the Kuruk-daryā, there existed a terminal lake of the Tārīm in a position corresponding to the present Lop-nōr, *recte* Kara-koshun marshes.

topography of the Lop territory, which during the first centuries before and after Christ included also 'Lou-lan', has been fully discussed in *Serindia*, i. pp. 318 sqq.; for that of the two small oases, Charkhlik and Mīrān, the only places of permanent occupation in modern times, cf. *ibid.* pp. 310 sqq., 326 sqq. <sup>16</sup>

Both these small cultivated patches occupy ground where the wide gravel 'Sai' descending from the foot of the mountains meets the southern edge of the belt of desert vegetation which accompanies the Tārīm river and its tributary, the Charchan-daryā. The junction of the two lies in the area marked by the lakes and marshes south of the fishing hamlet of Lop (A. 2). Apart from these two zones, the sheet shows in the north a dune-covered portion of the Lop desert, and in the north-east the western extremity of the great salt-encrusted bed of the dried-up Lop sea.

*Corrections.* A.3. Koyumal, Bāsh-koyumal should be printed red.

C.2. The latitude station symbol to be shown against Donglik (C. 142; C. 2) and to be removed from Mīrān Fort (B. 2).

$42^{\circ} 30'$ , the positions adopted for Turfān, Hāmi and Barkul served as base-points. In adjusting the traverses between them, use was made of the latitude observations shown below. The satisfactory character of the result is borne out by the close agreement with values astronomically determined by Dr. Vaillant in 1908 for two points on the Turfān-Hāmi high-road. <sup>17</sup> The small portion

<sup>17</sup> See *La Géographie*, 1921, xxxv. p. 499. Dr. Vaillant's chronometric longitude for Pichan (position not recorded) is  $90^{\circ} 7' 4''$  against  $90^{\circ} 8' 30''$  of our Pichan Camp 265, the latitude also agreeing within less than a minute. At Ch'ü-ku-lou, Camp 261 (D. 2) the latitudes are also identical, while Dr. Vaillant's longitude ( $91^{\circ} 52' 6''$ ) exceeds that shown on the map by only about 3 minutes.