

On the last day of my stay R. B. Lāl Singh safely rejoined me to my great relief after fully four months of separation. After leaving me in September in the mountains beyond Tāsh-kurghān he had pushed on to Kapa and started triangulation along the main K'un-lun range from the points to which Rām Singh's work of 1906 had brought it. Trying hardships attended his operations at great elevations and on ground devoid of all resources. But Lāl Singh faced them with his often proved determination and succeeded in extending his system of triangles eastward for fully five degrees of longitude, reaching peaks close to the west of Bāsh-kurghān, before excessive cold and heavy snowfall obliged him to cease observations in the mountains.¹⁵ The special difficulties with which the surveyor had to contend in establishing satisfactory stations and securing safe connections by well-conditioned triangles along a line of mountains running mainly from west to east, have been noted by Major K. Mason in Appendix A, when dealing with R.B. Lāl Singh's triangulation work of 1913-15. There an explanation will also be found of the corrections which the positions shown in the map for his triangulated points and stations require in order to bring them into agreement with the coordinates deduced by computation.

It was characteristic of R.B. Lāl Singh's energy that having found further triangulation impossible, he persisted in continuing survey work with the plane-table towards Tun-huang, taking special care to obtain astronomically determined latitudes and many height observations by mercurial barometer and clinometer along the route through those inhospitable snow-covered mountains.¹⁶ After reaching the small oasis of Nan-hu he struck through the desert northwards and returned by the track leading to Mirān and Charkhlik south of the salt-encrusted basin of the ancient Lop sea. The difficulties of this track, already surveyed by us in 1907, received fresh illustration by the fact that Lāl Singh's party found no ice yet formed at the most brackish of the springs along its western portion, and consequently suffered much from the want of drinkable water.

On January 15, 1914, our reunited party moved from Charkhlik to Mirān where renewed excavations at the ancient site marking the earliest capital of the 'Kingdom of Shanshan or Lou-lan' kept me busy for a fortnight.¹⁷ Other exacting tasks were provided by the final preparations for the explorations which were to take our several parties into the waterless desert north and north-east of the extant Lop-nōr.

News of threatened obstruction on the part of the provincial Chinese administration was a cogent reason for setting out for them with the least possible delay. An edict had in fact been issued by headquarters at Urumchi ordering the district authorities to prevent all surveying work on our part and in case of any attempt at continued explorations to arrest and send us 'under escort' to Kāshgar. How the 'revolutionary' outbreak at Charkhlik opportunely had saved my plans from being frustrated by passive local obstruction which certainly would have resulted from these orders, has been related elsewhere.¹⁸

On January 23rd I started Lāl Singh northward by the Tārīm to Tikenlik. Joined there by Abdurrahīm, the hardy hunter, who had been his guide in the Kuruk-tāgh in 1908, he carried out an exact survey of the ancient river bed and its branches by which the waters of the Konche-daryā once reached the area, now wholly desiccated desert, containing the remains of ancient Lou-lan.¹⁹ The site of the ruined Chinese station of Lou-lan, first discovered by Dr. Hedin and explored by me in 1906, was to be our rendez-vous. Surveyor Muhammad Yakūb, who could not be employed for independent work on unexplored desert ground without risk to himself and others, was sent off some days later by the Tun-huang caravan track in order to carry out the levelling operations referred to below from the eastern end of the salt-encrusted ancient Lop sea basin.

¹⁵ See Sheets Nos. 23. C, 2, D. 1, 2; 27. A. 1; 26. A-C. 4, D. 3, 4; 30. A-D. 3.

¹⁶ See Sheets Nos. 33. A-D. 2; 36. A-C. 2, D. 1, 2.

¹⁷ See Sheet No. 30. B. 2; *Third Journey, G. J.*,

xlvi. p. 119.

¹⁸ See *Third Journey, G. J.*, xlvi. pp. 119 sq.

¹⁹ See for Lāl Singh's route Sheets Nos. 30. A. 1, B. 2; 29. A. 4; 25. C. 3, D. 3, 4; 29. A-D. 3.