

Record of
Afrāz-gul's
observa-
tions.

Another day's halt at the spring was necessary in order to let Afrāz-gul's camels recover a little from their week's fasting and hard travel, and to allow of the dressing, by the experienced hands of Hassan Ākhūn, of the manifold cuts and sores from which they, as well as our own camels, were suffering. Nor would the violent Burān which broke upon us at night from the north-east, and caused us much discomfort by its icy blasts all through the day, have allowed us to move. Afrāz-gul's first verbal account had already assured me that, in the face of very serious hardships and of risks by no means negligible, he had succeeded in carrying out completely the programme I had laid down for him at Turfān. Now an inspection of his plane-table sheets, kept as always with scrupulous attention to details, and of his equally full 'route report', showed me how intelligently he had grasped the purposes for which he had had to undergo fatigues and privations. I had sketched out his routes for him with special regard to a number of geographical and antiquarian points of interest, upon which additional surveys along the ancient sea-bed and across the Lop Desert farther west were likely to throw useful light. The care with which he had recorded whatever observations might bear on such points has invested his survey with a value to which the mere reproduction of his route traverses on the map would not do full justice. I therefore consider it desirable to furnish here extracts from Afrāz-gul's route report in condensed translation. I have added to them remarks, where needed, as to the bearing which particular observations may have on questions of archaeological or geographical interest discussed in previous chapters.

Surveyor's
march to
Deghar.

The surveyor after leaving our base camp at Kara-khōja reached the town of Lukchun on February 6th via Toyuk. Next day he proceeded to the small oasis of Deghar, marking the extreme limit of cultivation in the south-eastern corner of the Turfān depression (Map No. 28. D. 3). Where the wide river-bed coming from Lamjin was crossed, about $3\frac{1}{2}$ miles south of Lukchun, he measured a volume of *c.* 17 cubic feet of water per second. From there to Deghar cultivation was met with only in detached Kārēz-irrigated patches.

Ascent from
Deghar.

Vegetation completely ceased beyond the fields of Sai-kārēz, an outlying farm of Deghar. The bed passed a mile beyond, which represents the easternmost drainage channel reaching the Turfān basin from the side of the 'Chöl-tāgh', had evidently received no water for a long time. The route towards Āltmish-bulak which Afrāz-gul's small party followed under the guidance of Abdulmalik, a younger brother of Abdurrahīm, led over absolutely bare gravel Sai to the debouchure of a wide Nullah coming from the south. For two and a half marches from Deghar the route ascended this open valley bordered on either side by low detached hills which gravel or detritus covered for the most part. No vegetation of any sort, live or dead, was met with in the valley, except at a small patch of stunted tamarisks known as Ghuja-yulghun (Map No. 28. D. 4). Nor was there water to be found anywhere.

Across
northern-
most range
of Kuruk-
tāgh.

A uniformly gentle slope led the travellers on the third day from Deghar to the Kōk-dawān (2,260 ft.), crossing an almost flat watershed. It evidently marks the eastern extension of that northernmost range of the Kuruk-tāgh which the other surveyed routes from the Turfān basin farther to the west cross by the higher saddles of Āt-ōlgan-dawān and Igar-dawān (Map No. 28. B, C. 4). To the south of the Kōk-dawān the route passed through the terminal basin of a separate drainageless area, containing stretches of salt-encrusted clay. Near the northern and southern limits of this basin there were found respectively the salt springs of Katār-yulghun and Shaldrang-bulak, and around them numerous small tamarisk-cones and a limited amount of scrub.

Springs of
Iltarguch-
bulak.

Beyond Shaldrang-bulak the route took a turn to SSW. and led across a succession of utterly barren plateaus, separated by dry drainage channels and rising at the Iltarguch-dawān to a height of close on 3,400 feet. No vegetation of any sort was met until after two marches the salt springs known as Iltarguch-bulak were reached, by the side of reed-beds and tamarisk-cones. The wide