

brushwood, reeds prevailed on the top of each layer. This suggested that they had been specially inserted there in order to provide a more level surface for the succeeding stratum of clay and gravel. From the solid regularity and neatness of the whole it may be inferred with considerable probability that the successive layers of this *pisé* had been systematically stamped within boarded forms, after the fashion still practised by Chinese and others in the dry Central-Asian regions. Water was in any case necessary for the construction, and must have been brought from the nearest lagoon or branch of the Su-lo Ho.

Dimensions  
and ma-  
terials of  
wall.

The thickness of the wall as actually measured across the top was over six and a half feet; it was apparently about one foot more at the base, allowance having to be made for the attrition which the uppermost layer of fascines had suffered on its edges through erosion. As both faces of the wall were practically vertical, its thickness must have been at first uniform throughout. That its original height was much greater may be considered certain; for, as subsequently noted, I found it still actually rising to over ten feet near T. XII, a tower on the Limes westwards. To this strangely built wall the salts contained everywhere, then as now, in the soil, the marshy water, and the desert vegetation had given a quasi-petrified consistency; their presence was attested in the wall itself and in all its materials by abundant salt efflorescence. Yet the fibrous reeds, when detached, and to a minor extent also the tamarisk twigs, still retained much of their natural flexibility.

Technical  
skill of wall  
con-  
struction.

To the pliant tenacity of this material, apparently so frail, it was mainly due that the wall had succeeded in withstanding for so long that most powerful of the forces which nature or man could bring against it in this desert region—slow-grinding but incessant wind-erosion. As I looked at it here rising before me, still solid with a strength upon which even modern field-artillery could probably make but little impression, I was more than ever struck by the skill with which those old Chinese engineers had not merely laid down their line, but also improvised its rampart. My subsequent explorations westwards, and those, too, by which in 1914 I traced the Limes far away to the east, have only tended to increase my respect for their remarkable exploits. Across a desert area extending over hundreds of miles, bare of all resources, and in most parts even of water, it must have been a most difficult task to construct so solid a wall as this. Merely to provide and maintain the labour for it required organizing powers of no small order. That in view of the magnitude of the enterprise the materials for construction had to be sought exclusively on the spot is obvious. But it illustrates the remarkable technical intelligence and adaptability of those who directed the enterprise that, hurried as the work of safeguarding the newly gained line must have been, they chose the materials and methods which, though of little apparent strength, were yet those best adapted to local conditions and most likely to make the achievement last for ages. I much doubt whether any others that they could have commanded, then or now, would have stood better the stress of two thousand years and the constant onset of eroding forces.

Difficulties  
of material  
and labour.

March north  
to Su-lo Ho  
bed.

For another mile and a half I continued the march among low sand-dunes without coming upon any further traces of the wall or sighting any more towers, though the view was open enough. I was forced to conclude that on this particular stretch of ground erosion had succeeded in its work of effacement. This has been confirmed by my experience of April, 1914, when, returning to the neighbourhood of this ground from the south under more favourable conditions, I had considerable difficulty in tracking the line again. On the previous occasion regard for our animals in need of water and grazing obliged me to break off the search and to turn northward to the river. It was reached after a march of over seven miles, crossing in succession a belt of absolutely sterile gravel, a dry river-bed with wild poplars still alive, a zone with dead tamarisk scrub, where a well-marked cart-track coming from An-hsi was encountered, and finally a belt of live riverine jungle containing the deep-cut bed of the Su-lo Ho. The volume of water that it carried at the time amounted, on