

SECTION V.—TRANSPORT PROBLEMS OF THE ANCIENT LOU-LAN ROUTE

Having now completed our survey of the whole of the desert ground which the ancient Han route crossed between the Tun-huang Limes and Lou-lan, we may now in conclusion briefly review the conditions under which traffic is likely to have been maintained along it. We may conveniently take the east as point of departure; for it was undoubtedly from the side of China that came most of the organization and of the resources that were needed for the maintenance of regular communication on a route beset with such great physical difficulties.

The problem of assuring these resources for the troops and convoys moving along the route to the 'Western Countries' must always have demanded much care on the part of the Chinese administration. Of this we have direct archaeological evidence in the imposing ruins, situated on the line of the Limes to the east of the ancient Yü-mên and marked by me T. XVIII, which my explorations and finds of 1907 have definitely shown to be those of an ancient Chinese magazine.¹ I have fully explained in *Serindia* the advantages which such an advanced base of supplies must have offered for the victualling of military expeditions, political missions, convoys, &c., whether going to or coming from Lou-lan.² The base itself could easily be reached by three marches from the town of Tun-huang.

On the two first marches beyond it, which led along the Limes line to its extreme western point, T. iv. a, near Toghrak-bulak, two essential items of supply, viz. water and such forage as plentiful reed-beds and scrub can offer, were, no doubt, as conveniently obtainable in ancient times as they are at present. In addition, the ground, mostly hard gravel 'Sai', offered easy going for laden animals and carts. Conditions were not so favourable on the two following marches, which, as we have seen, crossed the extremity of the 'Three Ridges Sands' and the ancient lacustrine basin, before bringing the traveller to the vicinity of the present Bēsh-toghrak. The ridges of drift-sand encountered before reaching the latter point would necessarily present difficulties, especially for carts. But they are not likely to have ever been more formidable than the similar difficulties which traffic still encounters and somehow overcomes on the present 'highways' of Chinese Turkestan and westernmost Kan-su.³ Water, too, was then probably more accessible than now at the eastern extremity of the old lacustrine basin.

From the vicinity of Bēsh-toghrak, where, as we have seen, the 'Chü-lu granary' of the *Wei* *lio* itinerary may with some probability be located,⁴ the route would inevitably lead along the northern side of the valley. Drinkable water from wells and some grazing on reeds and scrub were probably obtainable there over a marching distance of about eighty miles or four stages. This brings us to the vicinity of the point marked by our Camp cvi where vegetation at present ceases. It is somewhere near this point that, as explained before, the position of the 'Sha-hsi well' may with good reason be looked for.⁵ Considering how closely the salt-encrusted bed of the ancient sea beyond it approaches the foot of the cliffs marking the old shore-line, I think it very improbable that any appreciable quantity of vegetation could have been found beyond this point any more in Han times than now.

It seems safe to assume that, so far, the provision of water for men and beasts and of forage for transport animals could not have offered more serious difficulties in ancient times than are to

¹ See *Serindia*, ii. pp. 712 sqq.; Map No. 35. D. 4.

² See *ibid.*, ii. p. 715.

³ Thus, e.g., belts of drift-sand are crossed by carts on the 'high road' from Yangi-hissār to Kāshgar, Map No. 5. A. 2; from Yārkanḍ to Marāl-bāshī, No. 5. C. 3; west of the Khotan oas s near Kum-rabāt-pādshāhim, No. 9. C. 2. Very

formidable ridges of sand were surmounted by our carts at two points on the way from Kan-chou to Mao-mei; see Map No. 43. D. 1.

⁴ Cf. above, p. 308.

⁵ See above, p. 309.