(A. 1) to the south of Lo-t'o-ching (D. 3), appears to correspond in position and configuration to the first four ranges of the Pei-shan, described and mapped by Professor Futterer on his route from west of Ming-shui to the Su-lo-ho bend. [27]

Just as is the case on this far more westerly route, the second and third of the ranges, encountered by us north of Camps 212 and 209 respectively (B. 2, C. 3), showed the highest pass-levels, but without any strikingly great elevations above either pass. [28] Whereas, however, on Prof. Futterer's route-line the wide valleys or plateaus separating the ranges all seem to descend gently westward, those crossed by our route invariably appeared to have their drainage to the east or north-east, *i.e.*, in the direction of the Etsin-gol valley and basin. The chain of low hills shown on our map extending north of the Su-lo-ho bend and the Hua-hai-tzu depression, and an easterly continuation crossed by our routes from Mao-mei (Sheet No. 42. B, C. 3), evidently represent the fifth and southernmost Pei-shan range.

The zone in the southern part of the sheet shows several geographically interesting features. In the west we have the head of the lower Su-lo-ho valley, below the river's debouchure from the mountains. Further down (A. 4) its bed is hemmed in by a well-marked defile between the bold Wang-shan-tzu ridge, representing the eastern extremity of the outermost Nan-shan chain on the south, and a flat spur of the southernmost Pei-shan range on the north.

Into the basin-like head of the lower Su-lo-ho valley thus formed, there slopes down the almost imperceptible watershed, dividing it from the plateau between the two outer hill chains of the Nan-shan, which contains the small oases of T'a-shih and Ch'iao-tzu (A. 5). The latter derives its irrigation from springs, and the existence of a large ruined site above these, at the foot of a gravel glacis sloping down from the outer Nan-shan range to the south, here offers clear evidence of desiccation within historical times. [29] Whether this outer range, the second from the north, has a traceable continuation eastward on the wide gravel glacis sloping up towards the Su-lo-ho debouchure remains doubtful.

The oasis of Yü-mên-hsien (C. 5) derives its name from the ancient 'Jade Gate' (*Yü-mên*) of the *Limes*, originally situated in Han times far to the west of Tun-huang (No. 35. D. 4). Its cultivation stretches down to the neighbourhood of a practically level flat of scrubby, and in parts boggy, ground dividing the Su-lo-ho valley from the Hua-hai-tzu depression eastwards. This peculiar feature accounts for the curious bifurcation previously mentioned by which the Su-lo-ho, partly through irrigation channels and partly through inundation in the season of floods, feeds a stream flowing past the hamlets of Shih-êrh-tun and Shih-tun into the Hua-hai-tzu basin. [30]

This last named basin (D. 5) is a drainageless area, bordered in the north by the foot of the outermost Pei-shan range and in the south by a rugged hill-chain which trends to the south-east and attains its greatest height near Chia-yü-kuan west of Su-chou (No. 43 A. 1). The relation of this hill-chain to the Ala-shan mountain system, of which it appears like an extreme western continuation, must remain for the present doubtful. Apart from the stream below Yü-mên-hsien there drain into the Hua-hai-tzu basin the rivers of Ch'ih-chin and Po-yang-ho, coming from the Nan-shan and cutting through the hill chain just named in deep gorges. The subsoil drainage from the former gathers in springs below its alluvial fan and supplies irrigation to the

[27] See above p. 95, note 25.

[28] See Futterer, *loc. cit.*, p. 17. The highest point of Futterer's route, reached on the pass of his third range was 2,130 metres or 6,988 feet. This corresponds almost exactly to the elevation of our pass, 7,010 feet, across the Ma-tsun-shan (C. 3), the third range from the north.

[29] Cf. *Serindia*, iii. pp. 1100 sqq.

[30] See above pp. 32, 50. Prof. Futterer's above quoted paper, *Geograph. Skizze der Wüste Gobi*, p. 24, mentions that the Chinese 'Wu-chang Map', dating from the 17th century, shows a long-stretched lake or marsh bed to the north of the Su-lo-ho bend, extending also for a considerable distance to the east. This extensive lake has continued to be shown in modern maps, though its existence was rightly denied by Russian travellers.

The question as to how far the Chinese cartographic representation can be accounted for by the boggy ground below Yü-mên-hsien *plus* the basin of Hua-hai-tzu must be left for examination elsewhere. The line followed by the remains of the ancient *Limes*, which I traced both to the east and north-west of Shih-êrh-tun, makes the existence here of an extensive lake during or since Han times highly improbable.