

of the readings was enhanced by taking them at constant distances of 100 m. Owing to the amount of dust that filled the atmosphere the changes of temperature were slight. Every observation was made twice, that is to say, after taking a reading and recording it in my note-book, I repeated it again a second time, and thus was able to check the first reading. I gave the strictest instructions to the Cossack who looked after the staff, impressing upon him the necessity of exercising the utmost care, not to let the staff get displaced in even the slightest degree. The bottom of the staff was shod with iron, and rested in a socket in a brassplate,

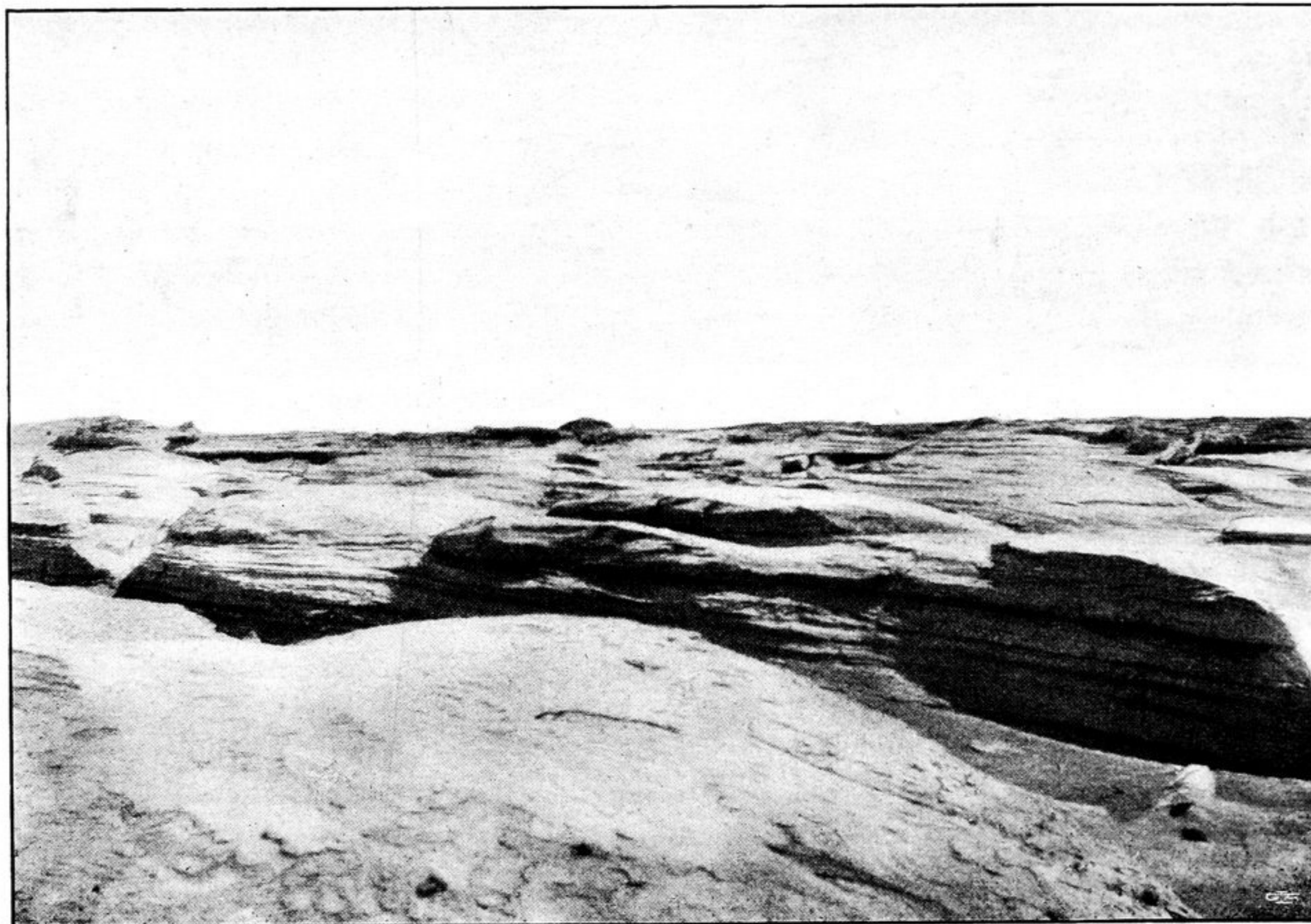


Fig. 145. JARDANGS IN THE NORTHERN PART OF THE DESERT, ALONG THE SURVEYED LINE.

which was screwed into a piece of flat wood for the staff to rest upon, and this we always used on clay soil, as well as among sand and schor. In taking the readings ahead there was no risk of error, since, once the staff was fixed in a vertical position, there it remained until I had taken my reading; but in taking the backward reading the risk was greater, for whilst I was advancing 200 m. farther south to take up a fresh station with the telescope, the staff had to be given a half-turn, so as to bring the graduated face round so that I could see it. It was here, in this turning movement of the staff, that the utmost care was needed. With the view of keeping to a minimum any possible error that might occur, the Cossack was instructed to turn and balance the staff with the points of his fingers only, so as to avoid exercising any pressure upon it. It was in the sand that these precautions were especially called for, but fortunately we very rarely encountered sand.