

out of his treasury, and his successor, after his death, continued the operations with the same princely liberality.

Several engineers and a body of sixty workmen were employed under the superintendence of Hekekyan Bey, men inured to the climate, and able to carry on the sinking of shafts and borings during the hot months, after the waters of the Nile had subsided, and in a season which would have been fatal to Europeans.

The results of chief importance arising out of this enquiry were obtained from two sets of shafts and borings sunk at intervals in lines crossing the great valley from east to west. One of these consisted of no fewer than fifty-one pits and artesian perforations, made where the valley is sixteen miles wide from side to side between the Arabian and Lybian deserts, in the latitude of Heliopolis, about eight miles above the apex of the delta. The other line of borings and pits, twenty-seven in number, was in the parallel of Memphis, where the valley is only five miles broad.

Everywhere in these sections the sediment passed through was similar in composition to the ordinary Nile mud of the present day, except near the margin of the valley, where thin layers of quartzose sand, such as is sometimes blown from the adjacent desert by violent winds, was observed to alternate with the loam.

A remarkable absence of lamination and stratification was observed almost universally in the sediment brought up from all points except where the sandy layers above alluded to occurred, the mud agreeing closely in character with the ancient loam of the Rhine, called loess. Mr. Horner attributes this want of all indication of successive deposition to the extreme thinness of the film of matter which is thrown down annually on the great alluvial plain during the season of inundation. The tenuity of this layer must indeed be extreme, if the French engineers are tolerably correct in their estimate