

total length of about 4,000 kilometers¹, making it the region with the largest number and most concentrated distribution of Karez wells in Xinjiang. The historical materials about Karez in Tulufan are the most systematic and abundant, and the systematic conservation and active inheritance is also the most representative. Particularly, the systematic conservation and active inheritance of the underground irrigation and water conservancy projects represented by Karez in Tulufan contains the historical intelligence of people of all ethnic groups and profoundly reflects the essence of fine Chinese culture.

I. History and current status of the Xinjiang Karez

The Karez well in Xinjiang originated from an ancient Chinese method, that is, the Guanzhong well-canal method in the Han Dynasty². It is a construction technology combining vertical shafts and culverts to build underground channels, which was invented during the construction of the Longshou Canal during the reign of Emperor Wu of the Western Han Dynasty. “The Treatise on Rivers and Canals” from *Shi Ji* (《史记·河渠书》) says, “The emperor therefore called up a labour force of over 10,000 men and set them to work digging a canal leading off from the Luo River at Zheng County and extending to the foot of Mt. Shangyan. However, it was discovered that the banks of the canal kept collapsing, so the men

1 *Conservation and Research on Karez in Tulufan*, edited by the Institute of Turfan Studies and Tulufan Museum (Appendix), Zhejiang University Press, 2023, p. 285.

2 Wang Guowei, “A Study on the Well-canal in the Western Regions”, in *Guan Tang Ji Lin (And Other Two Kinds)* (《观堂集林》). Hebei Education Press, 2003, p. 314.