



## **Hydrogeochemistry Characteristics and Daily Variation of Geothermal Water in the Moxi Fault, Southwest of China**

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The Xianshuihe Fault with frequent earthquakes activities is the regional deep fault in China. The Moxi Fault is the southern part of the Xianshuihe Fault, where the strong activities of geothermal water could bring abundant information of deep crust. In this article, some typical geothermal springs were collected along the Moxi fault from Kangding to Shimian. Using the the Na-K-Mg equilibrium diagram, it explains the state of water-rock equilibrium, and estimates the reservoir temperature basing appropriate geothermometers. Basing on the relationship between the enthalpy and chlorine concentration of geothermal water, it analyze the mixing progress of thermal water with shallow groundwater. Moreover, the responses of variation of geothermal water to the solid tides are considered to study the hydrothermal activities of this fault. The Guanding in Kangding are considered as the center of the geothermal system, and the hydrothermal activities decrease southward extending. Geothermal water maybe is heated by the deep heat source of the Himalayan granites, while the springs in the south area perform the mixture with thermal water in the sub-reservoir of the Permian crystalline limestone. It improves the research of hydrothermal activities in the Moxi Fault, meanwhile using the variation of geothermal water maybe become a important method to study the environment of deep earth in the future.