

The Geology of the Xizhuang Watershed near Beijing

Part

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Abstract

The Xizhuang watershed is located in the Qinling-Taiwan-Yunnan-Guizhou tectonic belt, which is characterized by intricate faults and folds conducive to the tectonic and landscape development of the watershed. The rock formations belong to the Upper Cambrian, the Ordovician, and the primary lithostratigraphy; carbonate rocks make up 40 per cent of all the bedrock in the watershed. As a result of a series of tectonic movements, fault activities, and the formation of cracks, this watershed is rich in underground aquifers and springs. To date, seven underground rivers and seventeen major springs have been identified. Most of these springs were discovered during the geological survey carried out by PAPGEP, the results of which are listed here. The survey also showed that except for the spring No. 10, whose source is unclear, almost all the underground water supplies originate from within the Xizhuang watershed. The influence of the rocks on soil formation, the occurrence of landslides and erosion instabilities, and effective measures to control geological hazards are also described.

Introduction