

Geochemical analysis of groundwater chemistry after the drift closure in granite

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This study aims to understand the hydrogeochemical condition and dominant process after the drift closure. To this aim the drift closure experiment was conducted in the granitic rock of 500 m below ground level of Mizunami Underground Research Laboratory. The groundwater chemistry such as major chemical component, pH and redox condition has been monitored in closed drift for 1 year. Dominant processes on chemical evolution of isolated groundwater in the closed drift were identified as follows; continuous replacement by surround rock water, microbial reduction, water –mineral interactions with evaporite, shotcrete and granite.

Keywords: groundwater chemistry, granite