

Anomalous change in groundwater temperature related to the 2004 Niigata Chuetsu Earthquake

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We have shown many new anomalous areas and zones in temperature and electric conductivity of groundwater related to the 2004 Niigata Chuetsu Earthquake, using the snow-melting wells (Sato et al., 2005). In this paper, we examine changes in groundwater temperature from 1972 to 2006. Our examinations indicate that several anomalous areas and zones in groundwater temperature existed before the earthquake and they remained unchanged until the earthquake. Considerable increase in groundwater temperature took place related to the earthquake. On the basis of the distribution of the anomalies, some buried active faults are inferred as follows: a N-S trending fault from the Ojiya City to Koshiji area and the southwestern extension of the Yukyu-zan active fault.