

Variation in the chemical composition of the depth ground water in Miyagi prefecture

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There are many reports of earthquake precursory phenomena of ground water. That is variation of water level, water temperature and water discharge. And there are many reports of precursory changes in ground water but there few little reports the other chemical composition. However there is example that change of chemical composition except radon as chlorine ion changes of ground water in the Kobe Earthquake (Wakita et al. 1995).

Variations in the chemical composition of ground water in earthquake reflect changes underground structure.

In recent years Wells over 1000m are bored for hot spring.

Then we began the continuous observation of chemical composition in the depth ground water of two wells over 1000m in Miyagi prefecture from October, 2002. One of two wells is located in Naruse town in Northern Miyagi prefecture and, it is 1700m in depth. The other is located in Western Sendai city, and it is 1025m in depth.

Dissolved anions and cations in ground water are measured with ion chromatograph. And dissolved alkaline metals and alkaline earth metals in ground water are measured with ICP-MS.

We will report this variation in the chemical composition of the depth ground water.