

Propagation processes of artificial disturbance in in-situ groundwater samples: an example of Kanamaru area, Yamagata, Japan

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Artificial disturbance on groundwater caused by drilling wells were caught in the Kanamaru area, Yamagata Prefecture using multi-level groundwater monitoring system.

Eleven wells, witch reach 30 to 50 meters depth, have been holed for geologic and hydrogeologic study in the Kanamaru area since 2002. PVC pipe screens were installed for most of them, and multi-level groundwater monitoring system (Westbay, MP system) for 1 well (Br.3-3). The seasonal change in profiles of major water parameters (T, pH, EC, DO, Eh) and concentrations of major and minor elements has been measured for various depths of Br.3-3. Some tracers (NaCl and KI) were put into other wells while or after drilling them to check the artificial disturbances of underground water, and the tracers have been observed from Br.3-3. These propagation processes of artificial disturbances among wells are reported.