

## Observations of water levels in wells in kii peninsula and response of water level to strain

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The hydrographic Department, Japan Coast Guard(1948) reported that the water level of many well at the Pacific coast of the Kii and Shikoku district were dropped several days before the 1946 Nankai earthquake(M8.0). It will be important that the mechanism of drop of the water level is made clear. We think that the drop of the water level before earthquake was caused by some strain changes. In order to research the characteristics of artesian wells, we began surveys and observations of water level changes in 2 wells at Inami town, Wakayama in 2001. And the observations of water levels of wells are extended to other areas. The water levels of Ichinenji well closed to seashore are affected by sea level changes and ocean tide.

In order to obtain the response of water level to ground strain, simultaneous observation of water level and ground strain was carried out in the vault at Donzurubo observatory. We get the coefficient of 50-100 mm/10<sup>-7</sup> strain and 20mm/10<sup>-7</sup> strain for long over several days and for short period than one day, respectively.