

Fold-and-fault structure associated with the Naganoken-hokubu Earthquake in 2014

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We made a geological map and geological cross sections. We also observed active fault outcrops considered to be related to the Naganoken-hokubu Earthquake in 2014. The Late Miocene to Pliocene strata in this region are separated by NNE-SSW reverse fault (Otari Fault). In the eastern area from the Otari Fault, Late Miocene Yanagisawa Formation is distributed, and subdivided to three members. In the western, Pliocene Hosogai and Iwatoyama Formations are distributed. The Iwatoyama Formation is subdivided to three members. The Hosogai and Iwatoyama Formations consist of syncline (Iwatoyama Syncline), and three members of the Yanagisawa Formation consist of anticline (southern extension of the Hidosawa Anticline) which is cut by the Otari Fault. The hinge lines of the syncline and anticline plunge to the south. The south end of the fold structure is located at the southern margin of the uplift in 2014.

Keywords: Nagano Prefecture, Hakuba Village, Otari Village, Kamishiro fault, active fault, fault rocks