

Borehole drillings and reanalysis of the S-wave reflection data across the Kamatoge segment of the Nishiyama fault

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The Nishiyama fault, northern Kyushu, runs along the sea of Genkai to Toho village and Asakura city. This fault is divided into three segments, such as Oshima segment, Nishiyama segment and Kamatoge segment. In the Kamatoge segment, there are two faults: the Kamatoge-Koishihara fault, trending NW-SE and the Haki fault, trending NE-SE. The former fault is a sinistral strike-slip fault and the latter fault is a dextral strike-slip fault. To clarify the subsurface geometry, geological structure and the fault activity, we carried out borehole drillings and reanalysis of the high resolution S-wave seismic reflection data based on the borehole data across the Haki fault in a Haki area.

According to the stratigraphic correlation, two beds of Quaternary strata, consisting of eight beds, are found only in a lowland area. We estimated that the Haki fault runs near the lowland area.

In the result of the reanalysis seismic reflection data, the geological structure around the middle of the seismic line is characterized by north-dip (to lowland area) reflection layer in more than 10m depth.

Keywords: Nishiyama fault, borehole drillings, S-wave seismic reflection