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Deep borehole drilling surveys in the Atera fault system, Central Japan

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We report the outline of the deep borehole drilling survey in the Atera fault system, which lies in Nakatsugawa and Gero areas, Gifu Prefecture, central Japan, conducted by NIED during the period of 1997-2000. Drilling was performed in the Hagiwara fault (one borehole) and the Atera fault (five boreholes) that are the members of the Atera fault system. The depth of the boreholes ranges between ca. 400 and 630 m. Rock core samples were collected at different depths along the each borehole, and served for various laboratory tests, such as unconfined compression and splitting test, triaxial compression test, permeability measurement, ultrasonic velocity measurement, rock density and absorption ratio measurement, thermal conductivity measurement, whole rock chemical composition determination of major and trace elements, and X-ray diffraction analysis.

Keywords: Atera fault, Hagiwara fault, borehole drilling, rock tests