

Temperature measurement in the borehole drilled into the fracture zone of Atotsugawa fault

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We performed 'Atotsugawa fault drilling' to investigate the structure of creep and adherence segment along the fault. We drilled down to the depth of 350m at Atotsugawa site where belongs to the creep segment. The drilling site was considered to be situated in the fault fracture zone of Atotsugawa fault itself because heavily fractured and altered cores were recovered continuously and physical logging showed features of fault fracture zone that were the same as the fault fracture zones of other active faults. We measured temperature profile in the borehole using temperature logging tool in order to compare with the seismicity along the fault. The standing time was 4805 hours at most. The temperature gradient was about 0.05 degree/m and was rather higher than the typical value in Japan, 0.03 degree/m.