

## A review of observation of fault zone properties and analysis of borehole core samples from fault drilling to the Nojima fault

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After the 1995 Hyogoken-nanbu earthquake, GSJ drilled a 747 m deep borehole at Nojima Hirabayashi penetrating the Nojima fault to elucidate the fine structure of the fault just after the large slip. Cores were recovered for almost entire depth interval. The fault zone has low resistivity, low density, low velocities, high porosity, and high  $V_p/V_s$ . The width of the fault zone from the drilling result is consistent with that estimated from the surface trapped wave observations. Permeability distribution in the fault zone were evaluated with very fine depth resolution from the tube wave analysis and Stoneley wave reflection, attenuation and slowness analysis. There are several permeable intervals in the fault zone, especially below the fault gouge.