

## Seismic reflection survey at the Kego fault, Kyushu, Japan

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Kego fault is one of the active faults in Japan, which located Kyushu Island, Japan. The fault is composed of two major segments; the earthquake fault of the 2005 West-off Fukuoka prefecture earthquake and southeastern part running through central Fukuoka City. We performed reflection survey at the southeastern part of the fault in order to explore detailed structure of the fault. The experiment was carried out on the two profile. One was located at central part of Fukuoka city with length of 1 km for obtaining reflection section shallower than depth of 1 km. Another was for imaging heterogeneous structure in the seismogenic zone beneath the fault, which was deployed 35 km length across southeast end of the fault. After applying seismic reflection processing, we obtain reflection sections for two profiles. The gap of horizontal reflector was found around the depth of 0.6 km in the shallow seismic section at central Fukuoka, corresponding to the Kego fault. The hanging wall of the fault is western side of the fault as geological study suggested. The deep section at the southeastern part of the fault reveals that strong reflective layers exist in the seismogenic zone at the west of the fault. In addition, we found many reflectors at the lower crust beneath the whole area of the profile.

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