

## Geological surveys across an inferred active fault in the Yamaguchi basin, western Japan

# Kiyohide Mizuno[1]; Taku Komatsubara[2]; Koichi Shimokawa[1]; Michio Morino[3]; atsushi Miwa[4]; Dai Nobuoka[5]; Noriko Matsuyama[6]

[1] Active Fault Research Center, GSJ/AIST; [2] Geol. Surv. Japan; [3] OYO Corp.; [4] OYO; [5] OYO,Energy Business Division; [6] Geo-Research Co.

<http://unit.aist.go.jp/actfault/activef.html>

The Yamaguchi basin is located in the middle part of the Oharako fault zone having a NE-SW trend in Yamaguchi prefecture, western Japan. We conducted seismic reflection profiling and all-cored boring in the Yamaguchi basin to detect a concealed fault below the alluvial plain. P-wave profiles show the shape of the boundary between unconsolidated sediments and basement rocks clearly. The boundary has steeply deepened southward near Nishiki River. An active fault is inferred to be concealed below the point. Boring survey was done near Nishiki River, and the core presents that the boundary between unconsolidated sediments and basement rocks is about 80 m deep. This depth is concordant with P-wave profiling results. The reflector about 15-25 m below the alluvial plain in S-wave profiles is traceable, and this reflector seems to have been dislocated about 5 m long.