

Seismic Reflection/Refraction Survey in Yatsushiro sedimentary basin, Kumamoto

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Seismic reflection and refraction surveys were conducted in Yatsushiro sedimentary basin, Kumamoto. The aim of this survey is to improve underground seismic velocity structure model in Yatsushiro basin for the strong ground motion prediction. We had two survey lines, the Uki line with the survey length of about 4km and the Yatsushiro line, about 7km length. Both lines crossed to the Hinagu fault zone, the SE end of the Yatsushiro basin.

Seismic images of both lines showed up to about 0.5-0.6km sedimentary layers and at those depth, P-wave velocity indicates about 4.6km/s from the refraction analysis. Those results seemed to correspond the depth distribution of the Ryoke belt from geological information from hot springs bowlings in this area. This survey was conducted as a part of the investigation of Comprehensive Research Project for the major active faults related to The 2016 Kumamoto Earthquake in 2016-2018FY.