

Determination of Subsurface Structure of Sakaiminato City in Tottori Prefecture, Japan Using Surface-wave exploration

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At the 2000 Tottori-Seibu earthquake, a strong seismic intensity area was appeared in Sakaiminato City, Tottori Prefecture, Japan. Explorations using surface-wave and microtremor were carried out in the same area to investigate a cause of the appearance of strong seismic intensity. We observed the surface-wave at 6 sites. These sites were points of the strong or weak seismic intensity zone. For surface-wave observation, McSEIS-SXW, CDP switch box and 24 geophones, natural frequency 4.5Hz, were used. We hit a ground surface and recorded surface-waves by 24 geophone. Geophones were set at 2m interval and records of sampling frequency were 1000Hz. S-wave velocity structure cross-sections of 6 sites were obtained by CMP analysis and inversion methods by 1D or 2D. The S-wave velocity values to the depth of 15m were from 150m/s to 200m/s.