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Stratigraphy about UHM22-1 core and activity of Uemachi Fault

KITADA, Naoko[1*], TAKEMURA, Keiji[2], ITO, Hiroko[1], INOUE, Naoto[1], MITAMURA, Muneki[3], ECHIGO, Tomoo[1]

[1]Geo-Research Institute, [2]Kyoto Univ., [3]Osaka City Univ.

In Osaka, Uemachi Fault is one of the famous active faults. It across the center of Osaka and lies in N?S direction mainly and is more than 40 km in length. Pliocene to Quaternary sediment 'Osaka Group' and terrace sediment are found to be deposited in the Osaka Plain and Holocene marine clay layers (Ma13) are covered these plains in order to sea level change. These sediment are very thick layers over 1000m therefore, fault structure are appeared as flexure zone (only vending the strata) and hidden the fault displacement around the surface. The up side on the fault (east side) is modified by erosion and urban development however, many seismic reflection surveys information the fault trace line on a piecemeal basis. One of the subway construction project across the fault, are carried out the many borehole drilling survey around the fault. It is the good case to understand the subsurface structure around fault.

KG-Net borehole database has more than 20,000 borehole data around Osaka. At first, we examined the borehole data along the seismic reflection line. And then consider the surrounded area. As a result, folding zone is distributed in the west side of Osaka area. We carried out the drilling the borehole and sampling the core samples in the Sakuragawa flexure zone near JR Nanba station (UMH22-1). About 120m deep core sample were analyzed by tephrochronological method, and correlated around borehole data. Ma5, Ma6 and Ma8 marine clay layers are correlated. The result of compare with the neighbor area, the average displacement speed indicates more active the Sakuragawa flexure rather than Uemachi fault zone

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Keywords: Osaka, Uemachi Fault, marine clay, Osaka Group, tephra