

Geophysical logging and in-situ stress measurements in the Unzen flank drilling

Ryuji Ikeda[1], Kentaro Omura[1], Tatsuo Matsuda[1], Toshiya Yamamoto[2]

[1] NIED, [2] GSC

In the two boreholes of flank drilling, Minami-Senbongi (UZ-1, 750 m deep) and Ohnokoba (UZ-2, 1400 m deep), in the Unzen volcano scientific drilling project, we conducted borehole well logging and in-situ downhole measurements. As a result, rock physical properties, such as resistivity, density, gamma-ray and magnetic susceptibility, have been revealed. We also found a characteristic stress state in the graben structure and the existence of a high temperature layer in the shallow part. These downhole measurements, however, were often accompanied with much difficulty. In the planned conduit drilling, we have to consider the method for downhole measurements that can be done in a short time with circulating cold mud water, and/or the use of heat-resistant container for logging sonde.