

Magnetotelluric survey in the southern region of the Kii Peninsula

Tsuneari Ishimaru[1], Yasuo Ogawa[2], Daijiro Uehara[3], Atsushi Tanase[3], Yukihiro Mizuochi[4], Atsusi Ninomiya[3], Tsuneomi Kagiya[5]

[1] Tono Geoscience Center, JNC, [2] TITECH, VFRC, [3] Sumicon, [4] Sumitomo Metal Mining Co.,Ltd., [5] Earthquake Research Institute, University of Tokyo

One important issue concerning the long-term stability of the geological environment is to clarify the cause of geothermal anomalies in non-volcanic regions. In order to estimate the resistivity structure of the crust at 10-30km, from the surface, a magnetotelluric survey was carried out in the southern region of the Kii Peninsula where many hot springs are distributed.

The results of this survey are: (1) recognition of a high resistivity part(100-1000ohm m) inclining west from near the surface to 20km depth in the middle to the eastern part of the peninsula; (2) recognition of a very low resistivity part(1-10ohm m) inclining west near a depth of 10km along the west side of the part with high resistivity.