Magnetotelluric survey in the southern part of the Kii Peninsula (2)

Daijiro Uehara[1], Yasuo Ogawa[2], Chifumi Kakuta[1], Takeshi Kudo[1], Koji Umeda[1], Atsushi Tanase[3], Masahiro Takeda[3], Akihiko Chiba[3], Akira Kikuchi[3], Tsuneomi Kagiyama[4]

[1] TGC,JNC, [2] TITECH, VFRC, [3] SUMICON, [4] 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 geothermal structure of the crust at depths up to nearly 30 km, magnetotelluric survey and gravity analysis were carried out in the southern part of the Kii Peninsula where many hot springs are distributed.

The results of these surveys indicate: (1) a high resistivity and high density part deepening toward the west at 0 to 20km depth in the eastern part of the peninsula; (2) a very low resistivity part near a depth of 10km along the west side of the high resistivity; (3) a low Bouguer anomaly area corresponding to the Kumano acidic rocks.