

Interpretation of the resistivity structure of the Aso caldera, central Kyushu, Japan

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Magnetotelluric (MT) measurements were performed along two NNE-SSW profiles traversing at the Aso caldera with a number of central cones. The analyzed resistivity sections of the lines were almost same and were consistent with the resistivity logging data of the nearby wells. The caldera is basically interpreted as a two-layer structure; an upper conductive layer and a lower resistive layer. The conductive layer corresponds to the caldera deposits. A very conductive zone appears at the surface of the hot spring. The low resistivity may be due to hot water or clay minerals that were produced by the geothermal alteration. An upheaval of the high resistivity layer is shown beneath the central cones. There are no conductors that correspond to magma at least to a depth of 10 km.