

Vp/Vs ratio and its fluctuation in the Kuju geothermal area, Kyushu, Japan

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The northwestern area of Kuju volcano is one of the most active geothermal fields in Japan, where seismic activities including seismic swarms have been observed. From November 1995 to May 1998 a Vp/Vs ratio study for microearthquakes was carried out in this area. From these results we conclude that Vp/Vs ratio changed with time. These Vp/Vs changes are associated probably with changes in the seismic activity of such area. In general Vp/Vs ratios were low (1.633-1.825) but near to the geothermal power stations the Vp/Vs ratios were Higher (1.775-1.875). We suggest that Vp/Vs ratios are affected by the presence of water, because the studied area are rich in fractures and geothermal fluids.