

Electromagnetic Monitoring in Usu Volcano(3)

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We have carried out repeated resistivity soundings after the 2000 eruption of Usu volcano. The Nishiyama steaming ground has expanded accompanied with the formation of fracture zones near the Nishiyama crater. For monitoring the development of the Nishiyama steaming ground, we have conducted resistivity soundings and ground temperature measurements repeatedly in December 2000, May 2001, and October 2001. The observed data reveal the following:

(1) Around fracture zones, the ground temperature was high as 100 degrees centigrade in maximum in Dec. 2000. Following the first measurements in Dec. 2000, the high temperature zone has expanded.

(2) In December 2000, resistivity was lower than about 10 ohm-m to the depth of 10-20m around fracture zones. In May 2001 and October 2001, the area of the low resistivity has expanded.

The low resistivity zone around the fracture zones suggests the existence of the plentiful ionized hot water.