

## Hydrothermal system beneath Usu volcano inferred from self-potential survey (2)

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We conducted self-potential (SP) surveys on Usu volcano since July to December 2006. The compiled SP map reveals positive anomalies around Ko-Usu lava dome and at the foot of the volcano, and a negative anomaly on the top of O-Usu lava dome. Topographic effect is clearly shown along the southwestern foot of the volcano, in which coefficient is about  $-2.5$  mV/m. The SP profile corrected of the topographic effect reveals a large and extensive positive anomaly over  $+600$  mV and several local positive anomalies over  $+1000$  mV on the summit caldera. The revealed large positive SP anomaly is likely to be affected by an extensive altered layer, located beneath the summit caldera. To clarify the SP anomaly origin, we conducted numerical SP simulations by using STAR and EKP post-processor. We will present and discuss the results and suggest a hydrothermal system in the Usu volcano.