

The volcanic structure around Akita-Komagatake by the boring core and wide area specific resistance

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The specific resistance distribution of the wide area was acquired by airborne electromagnetic survey to Akita Komagatake of quaternary era located in Akita and Iwate border between prefectures and the surrounding volcanic structure as well as boring exploration of depth 100m was conducted in Akita Komagatake hillside, so the result is introduced.

Boring exploration was conducted in an altitude 920m spot along a prefectural highway AkitaKomagatake line on Akita side. This spot is the area where Iwaisawa lava flow is distributed over a surface in Fujinawa and others (2006). Even 10.22 m of depth is regarded as the unit of this Iwaisawa lava flow as a result of the core confirmation, and the unit regarded as the upper part Tazawa-ko Lake high plain lava picks up the layer which seems to be scoria fall and a surge lodgment thin, and ranges to from depth 10.53m to 28.18m. Thick different (more than 40 m) lava ranges to from depth 58.9m to the deepest 100m. It was found that a detritus avalanche lodgment exists between the lava with this thick depth and the upper part Tazawako high plain lava. A detritus avalanche lodgment is divided into the matrix independent parts, the mass of rock independent parts, the jigsaw crack developmental parts and the mass of rock matrix intermingled parts, etc., and a change in organization can observe well from a core. Though this detritus avalanche lodgment makes Mt. flow interspersed among AkitaKomagatake foot of a mountain in a Sendatsu riverside, there is a possibility same as the Sendatsugawa detritus avalanche lodgment distributed (Doi and others, 1997). When a detritus avalanche lodgment shows the resistance value compared with roughly 150-170 ohm of inside-appearance low little and picks only the specific resistance band out when it's compared with resistivity distribution compared with the three dimensions by after-mentioned airborne electromagnetic survey, it's fan-shaped little to the foot of a mountain from the Katakuradake direction, because the aspect which spreads is seen, causality with northern caldera formation before Katakuradake formation is suggested.

On the other hand, airborne electromagnetic survey, AkitaKomagatake, the investigation including the Quaternary volcano body old little which are Sasamoriyama who ranges and Yunomoriyama, etc. in the northeast direction as well as build were performed and the specific resistance distribution of the wide area was acquired. It becomes as follows as the overall tendency of the specific resistance distribution.

AkitaKomagatake, the part with the low ratio resistance value is local by a body, and it's limited mainly around the northern white deterioration area in the 2nd horse's hoof type crater trace, Katakuradake crater remaining unknown trace and bottom of the valley in Mizusawa.

A high specific resistance area and a low specific resistance area are distributed over an old volcanic structure on the northeast side like a patchwork.

It's a low specific resistance area even around the mountain top in particular at Yunomoriyama, and it's supposed that groundwater is expensive and that deterioration is progressing by heat water. I'm also becoming a low specific resistance in particular at the topography part circumference where the trace fluidized with landslide is seen (Yunomori Yama north side and the nipple hot spring village south side), and hydrothermal activity is caused in the past, and makes them suppose to have made fluidization in landslide and earth and sand occur.

I can think it's to check the specific resistance distribution, and it's possible to grasp the

structure of the whole volcanic structure and the reach with a possibility that catastrophic sediment transport of sector collapse and landslide, and I'd like to go as the reference data for taking volcanic erosion control measures from now on.

Keywords: Akita Komagatake, Airborne electromagnetic survey, Boring exploration, Sector collapse, Detritus avalanch, Volcanic structure