

Subsurface geology of Mt. Fuji based on continuous cuttings from a borehole at Jyuriki, Susono City, Central Japan

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Many studies on the Fuji volcano have been done mainly based on surface geology. However, the subsurface geology such as distribution of the precedent volcanoes (Sen-Komitake, Komitake, and Ashitaka Volcanoes) and basement structure are not well known since the surface is mostly covered by young lavas and pyroclastics.

We analysed cutting samples retrieved from a borehole drilled at Jyuriki, Susono City, Central Japan (Latitude:35.2609 dN, longitude:138.7898 dE, Altitude: 900m, total drilling length: 1500m).

We recognized four units based on lithology and electric logging. They are unit I (0 to 220 m depth), unit II (220 to 510 m depth), unit III (510 to 980 m depth) and unit IV (980 to 1500 m depth).

Unit I, II, and III are mainly composed of basaltic to andesitic lavas. Whole rock chemical composition data suggest that unit I is derived from Fuji volcano and Unit II and III are derived from Ashitaka volcano.

Unit IV is mainly composed of altered andesitic to dacitic lavas and pyroclastics, probably belonging to the basement of Miocene formation. The altitude of the basement at Jyuriki is -80 m, which is similar level at Obuch, about 8 km west from the Jyuriki.

Keywords: Fuji volcano, Ashitaka volcano, Basement