

The occurrence combinations of Zeolites at Chichijima, Ogasawara Islands

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The Ogasawara Islands are located in the Pacific Ocean about 1000 km south of Tokyo, Japan. These Islands are situated in the outer of the Izu-Bonin-Mariana Arc. The Ogasawara Islands are composed by paleogene submarine volcanic formation, and is well known by andesitic volcanic rock called boninite. Boninite is a feldspar-free and glass-rich olivine-bronzite andesite with higher MgO, SiO₂, H₂O and Cr contents. Zeolites, co-exist with calcite, quartz/chalcedony and celadonite, fill the vesicles of volcanic gas, radial and columnar cooling joint of pillow lava, and also occur in interpillow sediment with large aggregate of crystals.

In this study, various habits of zeolites at Chichijima, Ogasawara Islands are obtained, also more than two-step growth of zeolites in amygdale were confirmed. Between these two-step growth, cation ratio have changed at the border of two faces.

These cation's contents are similar to neighboring rock. It is considered that there is another hydrothermal activity after the first-step growth.

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