

## Reconstruction of Middle Miocene volcanism in Dewa Mountains in Sakata city, Yamagata Prefecture, northeast Japan

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In northeast Japan, many submarine volcanic rocks related to opening of the Japan Sea in the Early Miocene are widely distributed. The most of basaltic rocks among them can be found in the Japan Sea side of northeast Japan. They were thought to be related to back-arc rifting due to opening of the Japan Sea (Sato and Amano, 1991), and discussed about the magma genesis (Tsuchiya, 1988; Yagi et al. 2001). However, there is no detailed sedimentological study, and the exact volcanic edifices and volcanism could not know. In this study, we tried to reconstruct the detail volcanic edifices and volcanism based on the facies analysis of volcanics in Dewa Mountains in Sakata, Yamagata prefecture. The submarine volcanoes of basaltic rocks which are about several km in diameter and over one hundred km high can be reconstructed. These volcanoes are mainly composed of resedimented hyaloclastites including fluidal-clast breccias with minor massive and pillow lavas. Their characteristics were very similar to those of submarine fire fountain eruption and those deposits (Fujibayashi and Sakai, 2003; Head and Wilson, 2003; Simpson and McPhie, 2001). In this study area, many dikes that were feeders of these basaltic rocks intruded. The palaeostress field in this stage was tensional (Sato and Amano, 1991). Reconstructed submarine volcanoes were related to fissure eruptions at the Japan sea opening.

### [References]

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