Hyaloclastites in Lower Pillow Basalts, South Andaman Island, Bay of Bengal, India

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Hyaloclastites and pillow breccias are exposed in the north-eastern part of the lower pillow basalt, which constitutes a part of the Andaman ophiolitic sequence, in the southern part of South Andaman Island. The hyaloclastite are composed of lava fragments in fine grained matrix. The lower pillow lava in which these hyaloclastites occur are basaltic in composition and tholeiitic in nature. In MnO-TiO_2-P_2O_5, Hf-Th-Ta and Nb-Zr-Y ternary diagrams, these basaltic samples show MORB affinity. The majority of the lava fragments in these hyaloclastites have planar surfaces as compared to those lava fragments which have concave outer surfaces and vesicular nature, suggesting that these hyaloclastites were produced by a gentle process rather than by explosive magma-water action in an oceanic environment.

Keywords: Hyaloclastites, basaltic fragments, pillow basalt, ophiolite, South Andaman Island.