

Petrological characteristic of the submarine volcanic rocks of the Southern Mariana Trough

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Submarine volcanic rocks of the southern Mariana Trough at about 13° are subalkalic basalt ~ andesite. Minor element chemistry of those rocks is similar to those of back arc volcanic rocks, while the contents of Ar, Rb and Ti of the studied rocks are less than the back arc volcanic rocks. V/Ti ratio indicates the similarity of those rocks to N-MORB. Since the chemical composition of back arc basin volcanic rocks becomes closer to that of MORB with increasing the maturity, volcanisms of the studied southern Mariana back arc spreading has more mature nature than those of the northern and middle Mariana Trough.