Petrographical characteristics of the crustal sequence of Atlantis Bank and Southwest Indian ridge

Natsuki Neo[1], Sumio Miyashita[2]

[1] Fac. Sci., Niigata Univ., [2] Dep. Geol., Fac. Sci., Niigata Univ.

Gabbroic rocks constituting lower oceanic crust are broadly exposed on the Atlantis Bank in the south-west Indian Ocean. Along the Atlantis II fracture zone, west to the bank, mantle peridotites and layered gabbros are exposed (Miyashita et al., 2002). Basaltic and doleritic rocks are also exposed in the Northern and eastern part of the Atlantis bank, in places, Therefore, a complete oceanic crustal assemblage appears in the Atlantis bank, though these stratigraphic and structural relations are complicated. The ages of these rocks are estimated to be about 11Ma. Bulk rock compositions, and mineral compositions are analyzed by XRF and EPMA.