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Role of emplacement of metamorphic (600C, 2 GPa at the maximum) and igneous-sedimentary rock blocks in the Mineoka belt

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The Mineoka belt, trending E-W in Boso-Miura Peninsulas, is a complicated fault belt. Blocks of basaltic, metamorphic, and sedimentary rocks of some m to some tens of m order, are involved in fault contact (Hirano et al., 2003 London SP; Takahashi et al., 2003 London SP; Mori and Ogawa, 2005 Island Arc). Their age, chemistry (major, trace and REE) were combined with geological setting into an integrated story (Mori et al., GSASP in press). Retrograde metamorphism is discussed on schistose and brecciated amphibolite facies rocks by means of paleo-thermobarometer of hornblende, using Holland and Blundy (1994) and Ernst and Lie (1998). Rutile in the hornblende is surrounded by titanite, suggesting that high temperature/pressure conditions of eclogite facies (650C, 2.0 GPa at the maximum) are converted to much shallower conditions during retrograde metamorphism. Cretaceous basalt of MORB chemistry and chert may represent a wide ocean before 40 Ma, and after 40 Ma the place becomes of an island arc setting with high pressure metamorphic rocks and quartz-diorite (tonalite) which are exhumed from a subduction zone. Then they are incorporated with island arc sedimentary rocks and are mixed with Shimanto Supergroup rocks into a complicated fault belt in a forearc sliver fault belt with serpentinite.

Keywords: Mineoka belt, basalt, metamorphic rock, eclogite facies, amphibolite facies, forearc sliver fault