

Constraints of basaltic rocks from Mineoka belt and NW Pacific tectonics

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We offer the most recent results that some tholeiitic basalts in the Mineoka belt are as old as Cretaceous, and some are Paleogene, and the youngest alkalic and calc-alkaline rocks are Miocene. The tholeiitic rocks are older than the calc-alkaline, which is further older than the alkalic. Another factor is deformation and related alteration and metamorphism. Most tholeiitic rocks suffer hydrothermal mineralization and interrelated deformations of normal and strike-slip faulting, suggesting original mid oceanic ridge-type activities (plausibly a back-arc spreading ridge setting). Late deformation with thrust and right-lateral strike-slip (transpressional) faulting is strong in most of the rocks, probably related to the oblique obduction or incorporation stage of the whole rocks to the belt before some time of the middle Miocene. The last deformation stage is still active, bringing all the rocks and sediments into a fault belt together with serpentinite blocks with metamorphic rocks in the right-lateral transpressional, forearc sliver-type faulting. A most plausible tectonic model will be presented as a very complicated setting as an unknown plate (including the Mineoka plate) on the westernmost Pacific region from Cretaceous to Miocene, different from the known Kula-Pacific into the Boso triple junction region. The relevant plate has an island arc-back-arc system with some metamorphic rocks. Further discussion should be done with much integrated consideration.