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Sedimentological Study of Bivalve Fossils Site Locality in Hong Hoi Formation in Lampang, Thailand

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Abstract : Hong Hoi Formation is a Middle Triassic deep marine succession presented in outcrops throughout the Lampang Basin of northern Thailand. The primary goal of this research is to diagnose the paleoenvironment, petrographic compositions, and sedimentary sources of the Hong Hoi Formation in Ban Huat, Ngao District. The Triassic Hong Hoi Formation is chosen because the outcrops are continuous and fossils are greatly exposed and abundant. Depositional environment is reconstructed through sedimentological studies along with facies analysis. The Hong Hoi Formation is petrographically divided into two major facies, they are: sandstones with mudstone interbeds, and mudstones or shale with sandstone interbeds. Sandstone beds are lithic arenite and lithic greywacke, volcanic lithic fragments are dominated. Sedimentary structures, paleocurrent data and lithofacies arrangement indicate that the formation deposited in a part of deep marine abyssal plain environment. The sedimentological and petrographic features suggest that during the deposition the Hong Hoi Formation received sediment supply from nearby volcanic arc. This suggested that the intensive volcanic activity within the Sukhothai Arc during the Middle Triassic is the main sediment source.

Keywords : Sukhothai zone, petrography, Hong Hoi formation, Lampang, Triassic
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