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Microfacies analysis and Paleoenvironment Interpretation ofUpper Oligocene Azkand Formation in Western Iraq

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Abstract

This paper deals with the microfacies and paleoenvironment interpretation of the Azkand Formation at the high Euphratesriver cliffs in north-western Iraq. In this study, the main components are dominated by the coexistence of large benthic hyalineperforated walls (Nummulitidae, Lepidocyclinidae, Amphisteginidae, Miogypsinidae, and Rotaliidae) and porcelaneousimperforate walls (Miliolidae, Peneroplidae, and Alveolinidae) with minor components of small benthic foraminifera. Otherfossils are dominated by coralline algae, corals, bryozoans, mollusks, and shell fragments. These microbiota are consideredbeneficial in the biofacies analysis and recognition of paleoecology. On the basis of large benthic foraminiferal assemblagesand microfacies features, eleven microfacies types have been recognized and interrelated. They indicate two depositionalenvironments

interpreted as shallow inner- to middle- ramp environments. The shallowest part in the studied section occursin the photic zone which is characterized by the association of miliolids, peneroplids, and alveolinids. The middle ramp isclassified into two shallow middle ramps characterized by dominant miogypsinis amphisteginids, and rotaliids, while thedeeper middle-ramp setting is dominated by coralline algae along with nummulitids and lepidocyclinids

Keywords: Azkand Formation, benthic foraminifera, paleoenvironment, ramp.