
INTEGRATED PALEOGENE SEQUENCE STRATIGRAPHY OF THE KOHAT BASIN, NORTHWEST PAKISTAN

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ABSTRACT

In this paper we present how synthesis of the Palaeogene foraminiferal biostratigraphy and sedimentological information augment the understanding of evolution of the depositional sequences in a very crucial time in the tectonic history of the Kohat Basin, north-western Pakistan. The foraminiferal biostratigraphy helped in constraining the geological ages of the stratigraphic units and its integration with the facies data provided insight into the stratigraphic framework for the identification and interpretation of the synchronous depositional sequences. The identified depositional sequences of the Kohat Basin in this study are defined as SK 1-2 and are separated by SBK 1-2 sequence boundaries. The depositional profile of the study area is consistent with a distally steepened carbonate platform.

A comparison of sea level changes with the Eustatic Sea Level Charts revealed a close match up between eustatic sea level fall around 49.5 (m.a) and a proto closure of the basin is indicated while a complete closure of the basin took place at 41.2 (m.a) which implies that full collision of India- Asia took place at this time.