

THE OCEANIC BASE OF SLOPE RECORD OF THE PERMIAN-TRIASSIC CRISIS: VIEW FROM TETHYS (OMAN)

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The Oman Mountains provide some of the best sections of Permian and Triassic sediments from ocean sea floor to base-of-slope environments related to the distal South Tethyan margin. The central part of the range exposes the Buday'ah section of oceanic sediments in the so-called "Hawasina allochthons".

The locality of Wadi Maqam in the north-western part of the Oman Mountains is among places where the thick Permian-Triassic base-of-slope sediments is exposed (Baud et al., 2001). Overlying 400 m of middle Permian limestones and dolomites, the upper Permian sediments consist of 50 m of \approx 10 cm thick beds of cherts and dolomites rich in sponge spicules. The top of the Permian units is well bioturbated lime mudstone-wackestone, devoid of cherts and dated as late Changhsingian (Krystyn in Richoz et al., 2005). The boundary yellow shales are overlain by very thinly bedded, laminated microbial platy lime mudstone with *H. parvus*. The dramatic loss of the burrowing infauna indicates the appearance of oxygen-poor water. These Induan sediments are about 25 m thick and show at the top the first calcirudites, commonly clast-supported (edge-wise conglomerates), and are characterized by tabular clasts representing the sub- in situ reworking of the laminated, platy calcilutite. The very thick Smithian overlying litho-unit (up to 900 m) marks the onset on the base-of-slope of a deep-marine basin in which carbonate submarine fan deposits developed. This very thick unit consists essentially of platy limestones, calcarenites and calcirudites. It comprises mainly grey-beige calcilutite, laminated and flaggy, interbedded with sparse beds of fine-grained calcarenite in cm beds. Channelized beds of intraformational calcirudite are also part of this succession which constitutes the greater part of the outcrop available. During the Spathian to Anisian, the sedimentation changes to terrigenous mudstone and siltstone that ended with Ladinian radiolarites.

REFERENCES:

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