

# QUATERNARY ECHO-FACIES CHARACTERISTICS AND DISTRIBUTION ON THE MAKRAN MARGIN

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## ABSTRACT

The Makran slope-apron system is a stepped convergent margin across an active subduction complex. Shallow penetration piston cores were recovered from the upper slope region (1325 m), three mid-slope basins (1768-2482 m) and the abyssal plain (3274 m). In these regions turbidites and hemi-pelagites were seen to be closely interbedded, with generally more turbidites in the ponded basin areas and more hemi-pelagites on the open slope region. The facies characteristics and their distribution was further studied using 3.5 kHz profiles, that show transparent drape sheet echo-facies (Type A; hemi-pelagites) most common over the open slope and inter-basinal highs; and strong parallel multiple echo-facies (Type D; turbidites) within the basins and on the abyssal plain. The basin margins and the steep flanks of inter-basinal highs are characterised by irregular-chaotic echo-facies (Type C; slumps and debrites). The lateral distribution of both Type A and D echo-facies (hemi-pelagites and turbidites) are influenced by sediment focusing along pathways between slope basins. At a large scale, climate, sea-level and tectonic effects on the Makran Margin have all played an important role in shaping margin sedimentation.

**Key words** Makran margin, turbidites, hemi-pelagites, 3.5 kHz profiles