

SEQUENCE STRATIGRAPHIC SUBDIVISION OF THE PERMIAN ZALUCH GROUP (SALT RANGE AND TRANS INDUS RANGES, PAKISTAN)

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The marine Permian strata and the Permian/ Triassic boundary are well known from the Salt Range and Trans Indus Ranges in Pakistan. During that time a carbonate platform developed on Gondwana continental crust in front of the Indian Shield. The platform was influenced by sea-level fluctuations and by repeated intervals of uplift associated with an increase in clastic terrigenous input. Sedimentary environments of the Zaluch Group represent a siliciclastic shelf and a carbonate platform with reef patches, bioclastic shoals and tidal flats. The formations of the Zaluch Group form part of the second-order Middle Apsaroka megacycle. Third order cycles are represented by 8 depositional sequences. The Amb Formation is a complete sequence bounded by sequence boundaries. The upper one may correlate with the sea-level fall at the Woardian/Capitanian boundary. Two sequences are discernible from the overlying Wargal Formation. The Chhidru Formation contains 4 sequences, each with a lower sandstone and an upper sandy carbonate unit. The topmost White Sandstone Unit is a separate lowstand deposit. The boundary between the Chhidru and the Mianwali Formation (part of the Musa Khel Group) is an erosional unconformity and sequence boundary. The overlying transgressive system tract is developed in subsequent phases. The Permian/Triassic boundary coincides with a transgressional surface subdividing the Kathwai Members A and B of the Mianwali Formation.