

FOLD-THRUST STYLES IN THE MARWAT-KHISOR RANGES, NWFP, PAKISTAN

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The Marwat-Khisor ranges define an eastwest to northeast trending fold-thrust belt flanking the mobile perimeter of the Bannu Basin in the south. Key structural elements of the Khisor Range are the Paniala, Saidyuwali, Mir Ali and Khisor anticline along with a frontal thrust named as Khisor Thrust whereas Marwat Anticline constitute the main topographic expression of the Marwat Range. All these folds are generally asymmetric, overturned displaying south facing. Construction of balanced structural transects across these ranges suggest that the structural style is thinskinned comprising decollement thrust-fold assemblages, kinematically related to a regional basal decollement located at the base the rocks of Jhelum Group. The Marwat Anticline initially evolved as a low amplitude detachment fold that was subsequently displaced over a non-emergent fault ramp to form fault-bend fold geometry. This event was followed by another thrust ramp from the basal decollement in the south, forming fault-bend anticlinal folds in the overlying strata and finally emerged as Khisor Thrust at surface juxtaposing Jhelum Group against the rocks of Siwalik Group.