

Stratigraphy and Structural analysis of areas within Hazara Kashmir Syntaxis, North Western Himalayas, Pakistan

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Abstract

The Paleocene-Eocene sedimentary rocks with unconformable contact with underlying Late Cambrian Abbottabad Formation and disconformable contact with overlying Miocene Murree Formation are exposed within a regional geological structure recognized as the Hazara Kashmir Syntaxis (HKS) in North Western; sub Himalayas, Azad Jammu and Kashmir, Pakistan. The area is highly deformed by the folds and faults owing to tectonic activities. The Chalpani anticline, Patikka syncline, Patikka anticline, Panjgran syncline, Panjgran anticline, Devlian anticline, Balgran syncline and Nauseri anticline are the intraformational folds within Murree Formation.

The Yadgar-Back Thrust, Ghoriback Thrust, Chalpani fault, Devlian fault and Main Boundary Thrust (MBT) are the emergent faults of the area. The Yadgar-Back Thrust is reverse in nature and marked in Margala Hill Limestone. The Ghoriback Thrust is a northeast-southwest trending fault within Murree Formation. This fault is a back Thrust which is reverse in nature. The Chalpani fault is a northwest-southeast trending fault within Murree Formation. The Devlian fault within Murree Formation is marked on the basis of shearing, crushing, breccia, tilted or

uplifted terrace and offset of river. The Main Boundary Thrust (MBT) is a northwest-southeast trending regional structure between Miocene Murree Formation and Panjal Formation in which Panjal Formation is thrust over the Murree Formation. The MBT and Panjal thrust are folded around the syntaxis.

Biography:

Muhammad Yasin Khan has pursued his own studies in the field of Geology at the Institute of Geology, University of Azad Jammu and Kashmir, Muzaffarabad, Pakistan. He has his expertise in the field of Structure Geology, Neotectonics, Petrology, Stratigraphy and Sedimentology. He has also carried out various field excursions across Indo-Pakistan plate and Eurasian plate, Himalayas as well as in salt range and adjacent areas of Pakistan. He has several publications in various National and International Journals having citations in reputed journals. At present time he is serving as the Research Associate in the Department of Geology, University of Azad Jammu and Kashmir, Neelum Campus, Athmuqam.