

**STRUCTURAL EVALUATION OF MARGALLA HILLS IN  
THE VICINITY OF TALHAAR VILLAGE, ISLAMABAD,  
PAKISTAN.**



**By**

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*Dedicated to our Parents. May they live long Aameeen.....!*

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## ABSTRACT

This research work is based on the structural evaluation and problems associated with the geological mapping of the Margalla Hills. Area in the north of Islamabad is selected for this research. In this area repetition and miss matches of the stratigraphic formations indicate the presence of folds and faults at a map able scale. Main boundary thrust, Talhaar thrust, Talhaar syncline, Pir Sohawa anticline and Sanghara anticline are the major structures present in this area. MBT is frontal thrust marked in the field by faulted contact of Jurassic Samanasuk Formation and Murree Formation. Outcrop folds are observed in the field involving shale of lower member of Margalla and Patala Formation. These outcrop scale folds are formed as secondary folds in major folded structures due to competency contrast and strain accommodation. The chemical weathering of limestone has obscured the primary bedding foliation so structural mapping in this area through satellite imagery could yield wrong orientation research. The fractures are very well developed which often reveals to be the bedding. So, proper care must be taken for advanced geological mapping in this area. Two thrust sheets, Talhaar thrust sheet and Margalla thrust sheet are present in the study area. Theses thrust sheets are bounded by Talhaar thrust and Main boundary thrust respectively. The synclines and anticlines are formed within thrust sheets to accommodate the strain resulted by southward progression of Himalayan induced deformation. The mollasse sediments are restricted to the south of MBT and no evidence of these depositions is recorded in north of it, which suggests that area didn't act as depocentre for the accumulation of mollasse in Miocene and younger time.

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