

Flap Structure Geometry in Breakthrough Structure: A Case Study from the Southern Tunisian Atlas Example, Orbata Anticline

Authors : Soulef Amamria, Mohamed Sadok Bensalem, Mohamed Ghanmi

Abstract : The structural and sedimentological study of fault-related folds in the Southern Tunisian Atlas is distinguished by a special geometry of the gravitational structures. This distinct geometry is observable in the example of a flap structure in Jebel Ben Zannouch with the formation of a stuck syncline. This geometry can be explained by the mechanism of major thrusting in Orbata anticline in the occidental extremity of Gafsa chains, with asymmetrical flank dips and hinge migration kinematics. These kinematics was originally controlled by the Breakthrough structure; the study of this special geometry of gravity flap structure depends on the sedimentation domain, shortening ratios, and erosion speed. This study constitutes one of the complete examples of kinematic model validation on a field scale.

Keywords : fault-related-folds, southern Tunisian Atlas, flap structure, breakthrough

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