

## Tectonic Inversion Manifestations in the Jebel Rouas-Ruissate (Northeastern Tunisia)

**Authors :** Aymen Arfaoui, Abdelkader Soumaya, Nouredine Ben Ayed

**Abstract :** The Rouas-Ruissate is a part of the Tunisian Atlas system. Analysis of the collected field data allowed us to propose a new interpretation for the main structural features of this region. Tectonic inversions along NE-SW trending faults of Zaghuan and Holokinetic movements are the main factors controlling the architecture and geometry of the Jebel Rouas-Ruissate. The presence of breccias, slumps, and synsedimentary faults along NW-SE and N-S trending major faults show that they were active during the Mesozoic extensional episodes. During the Cenozoic inversion period, this structure was shaped as imbricate fans transformed by NE-SW trending thrust faults. The angular unconformity between upper Eocene-Oligocene and Cretaceous deposits reveals a compressive Eocene tectonic phase (called Pyrenean phase) that occurred during Paleocene-lower Eocene. The Triassic salt acted as a décollement level in the NE-SW trending fault propagation fold model of the Rouas-Ruissate. The inversion of fault-slip data along the main regional fault zones reveals a coexistence of strike-slip and reverse fault stress regimes with NW-SE maximum horizontal stress ( $S_H$ max) characterizing the Alpine compressive phase (Upper Tortonian).

**Keywords :** Tunisia, imbricate fans, Triassic décollement level, fault propagation fold

**Conference Title :** ICGGMR 2022 : International Conference on Geosciences, Geology and Mineral Resources

**Conference Location :** New York, United States

**Conference Dates :** April 25-26, 2022