

Geophysical Contribution to Reveal the Subsurface Structural Setting Using Gravity, Seismic and Seismological Data in the Chott Belts, Southern Atlas of Tunisia

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Abstract : Physical methods based on gravity, seismic and seismological data were adopted to clarify the relationship between the distribution of seismicity and the crustal deformations under the chott belts and surrounding regions, in southern atlas of Tunisia. Gafsa and its surrounding were described as a moderate seismic zone, and the fault of Gafsa is one of most seismically active faults in Tunisia in general, and in the southern Atlas in particularly. The present work aims to prove a logical relationship between the distribution of seismicity and deformations which strongly related to thickness and density variations within the basement and sedimentary cover along the study area, through several physical methods; gravity, seismic and seismological data were interpreted to calculate physical propriety of the subsurface rocks, the depth and geometry of active faults and causatives bodies. Findings show that depths variation and mixed thin and thick skinned structural style characterizing the chott belts explain the moderate seismicity in the study area.

Keywords : potential fields, seismicity, Southern Atlas, Tunisia

Conference Title : ICGS 2020 : International Conference on Geosciences and Seismology

Conference Location : Dublin, Ireland

Conference Dates : November 05-06, 2020