Ikram Boutirame et al., Int J Earth Sci Geol. 2019
http://dx.doi.org/10.18689/2642-1569.a2.004

Interpretation of Geophysical Data for Structural Pattern of Beni Mellal Atlas (Morocco): Hydrological Implications

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The current study consists of a combined interpretation of gravity (Bouguer anomaly) and aeromagnetic (residual magnetic field) data to extract the lineament network affecting the Beni Mellal Atlas structure. Indeed, the computation of the horizontal gradient coupled to the upward continuation allowed to highlight three faults families oriented (N50-70°), N-S (N170-180°) and E-W (N90-100°). The projection of all springs on the structural map showed that those springs emerge at the over-cross areas of thrust-faults with the strike-slips faults oriented respectively N-S (N170-180°) and NE-SW to ENE-WSW (N50-70°).

Keywords: Gravity; Aeromagnetic; Lineaments network; Beni Mellal Atlas; Spring emergence.

Biography:

Ikram Boutirrame has received BS degree in geomatics applied to the geosciences from the Faculty of Sciences and Technics, Morocco and also received MS degree in Applied geophysic and Geological Engineering from Moulay Ismail University in Morocco. Currently, she is pursuing PhD degree, working on Geophysical prospecting and its application in hydrogeology in Faculty of Sciences and Technics of Beni Mellal, Morocco.