



Stresses analysis of active area in the eastern desert of Egypt using magnetic and anisotropy techniques

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The aim of the present study is to obtain the stress direction using magnetic anisotropy and aeromagnetic interpretations. Representative sixty oriented rock samples have been collected from five sites in the study area. The rocks magnetic properties and magnetic anisotropy analysis have been determined for all the studied samples. The interpretation clearly defined magnetic lineation at all site and anisotropy of magnetic susceptibility (**AMS**) parameters. The stress direction of the studied area has been determined using magnetic anisotropy and aeromagnetic analysis. The specific objective of the aeromagnetic interpretation is to establish the trend and depth of the structural configuration of the basement rocks.. Horizontal gradient could to delineate deep sources and enabled tracing several faults that are mainly striking in the E-W direction. Euler deconvolution method has been applied to the aeromagnetic data and provided fast information about depth and trends of the shallower subsurface structures. In agreement with results from AMS interpretation has been estimated and the present stress direction results agree with the geological and tectonic information in Red Sea and Aswan areas.