

## **SUBSURFACE TECTONIC STRUCTURE AND CRUSTAL DEFORMATION AT KALABSHA FAULT, ASWAN-EGYPT**

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Aswan region became tectonically interesting especially after the occurrence of the 14 November 1981 earthquake ( $M=5.4$ ), which occurred near Aswan reservoir. The seismically active area in Aswan is located beneath Kalabsha fault zone. Several study programs were performed in that area. Detailed land magnetic survey was carried out in selected profiles at the active part of Kalabsha fault. The analysis of the magnetic data is imaging the fault plane where the basement rocks are shallow. The crustal deformation round the active part of Kalabsha fault has been examined, using the seismological and GPS network during the period (1997 – 2007). These observations are important, based on studying the subsurface structures and tectonic elements around the northwestern part of the reservoir. The results from data sets (magnetic, seismic and GPS) are compared and combined in order to determine the main characteristics of the deformation and hazard estimation for the specified area in Aswan.

Crustal deformation, seismicity, land magnetic survey,

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