

DELINEATION OF REGIONAL TECTONICS OF NORTH EASTERN POTWAR BY USING GRAVITATIONAL METHODS

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Gravitational methods have been used to interpret the subsurface structure of Islamabad, Rawalpindi and adjoining areas. The Bouguer Anomaly maps are showing different anomalous zones corresponding to tectonic structures present in the area. The variations in the Bouguer Anomaly values in the northern part of the study area are less compared with the southern part due to more deformation near the Soan area. The Prominent tectonic features of the area are Soan Syncline, Soan Backthrust, Shakar Parian Anticline, Riwat Fault, Khairi-Murat Fault, Golra Fault and Bokra Anticlinal structure, most of them are identifiable on the Bouguer Anomaly map. The tectonic structures are further differentiated by regional and residual Bouguer Anomaly maps. The regional map shows almost same trend as the Bouguer Anomaly Map of Pakistan. The Residual Bouguer anomaly Map further highlight the shallow structures. The interpreted structures have been verified by already available structural model of the area. A geoid map of the study area was prepared by using EGM96 world geoidal model, and was analyzed with respect to interpreted structures.