-AN INTEGRATED SEISMOTECTONIC MAGNETOTECTONIC STUDY FOR THE MIOCENE – PRE MIOCENE SEQUENCE IN ABU RUDEIS-RAS BUDRAN AREA GULF OF SUEZ,EGYPT

An integrated study between the geological, aeromagnetic and seismic data were carried out to evaluate the subsurface geologic conditions in the area occupying the north central part of the gulf of suez, between latitudes 28o 48, &26o 59, N and longitudes 33 02, & 33 15, E. IT includes three important oil fiel;ds, Ras Budran Field to the north, Abu Rudeis-Sidri Field to the south, and Abu Zenima Field between them, added to East October field to the west.First, the geological setting of the study area and that of the central part of the gulf of suez province were studied to throw some ligh on the geomorphology, stratigraphy, tectonics and geologic history of the considered area.Cumulative qualitative and quantitative analysis of the filtered regional and residual magnetic components coloured images, as well as images of the second vertical derivatives of the reduced to the northern magnetic pole of the total magnetic intensity field images, supplemented with the available geologic information, enabled the precise delineation of the detailed structural configuration of the basement complex, which consequently illustrated the structural deformational pattern of the overlying sedimentary succession. The basement tectonic map reflects a series of N-S to NNW-SSE oriented belts of high and low basement structures. These structures are interrupted by a set of NE-SW crossing diagonal faults having varying throws and creating promising blocks for exploration.The structural configuration, as well as the tectonic features of the concerned area was criticized through the study of 2Dand 3D seismic data interpretation with the available geologic data, in which the geoseismic depth maps or the main interesting levels (kereem, Nukul, Matulla, Raha and Nubia Fms.) were depicted.