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Assessment of the geological evolution and hydrocarbon potential of Abu Sennan area through the interpretation of the seismic and log data, Western Desert, Egypt

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Abu Sennan Area (Study Area) is located in the northern western part of East Bahariya Oil Field which is located in the northern part of the Western Desert. The aim of this study was to combine the different available data to understand the subsurface system and properties of the Late Cretaceous reservoirs; one the important reservoir and the main producer reservoir is Abu Roash (G) Member at surrounding oil fields. Seismic interpretation was conducted on the available seismic data concerned with the study area to provide a detailed structural interpretation to determine the structure features of the study area for detecting the best localities for drilling new exploratory wells within the study area to understand the petroleum system for the area. Two horizons have been identified and a depth structure contour map has been constructed on the top of main reservoir Abu Roash (G) Member. The structure contour map and the geological interpretation showed that the area was affected by tectonic deformation system caused regional uplift and the 3D structural model showed that The main structure responsible for hydrocarbon entrapment in the study area is the structure trend NW-SE normal fault; The structural set up has been configured also through the constructed structural contour maps on top Abu Roash "G" Member. A relation between the facies change and the fault pattern was obvious, and proved a good trapping style in the study area.

Biography

Ahmed Abd El- Gawad Sultan is a confident technical professional with broad and full understanding of the Exploration and Studies business. He has more than 12 years' experience (offshore and onshore) in Petrophysics, Geology, Reservoir Evaluation, Modeling and the integrated work programs/projects. He has received his BSc in Geological and Geophysical Engineering from Faculty of Petroleum and Mining Engineering from Suez University in 2005 as a well as MSc in Geoscience from the same faculty, where he teaches Petroleum Sciences in the Geological and Geophysical Engineering Dept. He has completed his PhD in Petrophysics in 2017 from Faculty of Petroleum, Suez University. He has published and a co-author for around 15 technical papers and presentations.

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