

## **Offshore Tectonic Analysis of Arabian Sea.**

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Tectonically, the submarine geomorpho-logic features of Arabian Sea are distinct as well as puzzling and show altogether different geological conditions from each other. Geology of the Arabian Sea is as interesting as that of Pakistan's mountainous region stretching as axial fold-thrust belt from the east-west trending Himalaya-Karakoram mountain ranges in the north to the coast of the Arabian Sea in the south. Owen Fracture Zone and Murray Ridge Complex are the most significant exotic submarine features in the Arabian Sea. The geological status of these geomorphic features are so far not clear. Based on the various geo-scientific data on the Owen Fracture Zone and the Murray Ridge, a number of interpretations and models were rendered time to time by the researchers. Most of the previous researchers initially considered the Owen Fracture Zone as a branch of the Carlsberg ridge extending northward across the Arabian Sea, curving eastward as the Murray Ridge to a point near Karachi and further extending northward as Ornach-Nal-Chaman faults truncating against Herat fault of Afghanistan. On the other hand, the present seismicity study supplemented by the bathymetry and the available geological data reveals that practically the Carlsberg ridge, Owen Fracture Zone, Murray Ridge, Ornach-Nal fault and the Chaman fault are different tectonic features associated with separate tectonic domains and can not be grouped together as commonly done earlier. This paper describes the analyses of fault plane solutions of earthquakes associates with different submarine features of Arabian Sea and the prevailing tectonic stresses in the region.