

INDIAN DEEP WATER BASINS HOLDS HOT PLAYS FOR NEW MILLENNIUM

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The vast track of unexplored deep water basins of India is expected to host variety of surprises and challenges during the next millennium. These basins have been evolved through a complex cycle of plate tectonic movements and is the resultant of interrelated processes such as subsidence, sedimentation, structuring and heating. Based on the tectonic frame work, depositional fill and geometry, the deep water basins of India have been categorised under 3 broad heads. A comprehensive geoscientific analyses have been carried out to identify the major associated play types in each of them. I. Divergent margin basins (West Coast) The western margin basins were developed by sequential rifting and is still in the divergent set up as the spreading of the Arabian Sea on either side of the Carlsberg Ridge continues. Play types - compressional folds, shelf - slope break mounds and fan deposits. II. Divergent margin basins (East Coast) The basins are in the divergent set up since the rifting of India - Antarctica with minor tectonic modification. Play types - turbidites, gravity slumps, fan / channel fill, roll over anticlines, shelf - slope breaks, drape over, wedge out, half grabens. III. Convergent margin basins; (Andaman - Nicobar) Andaman - Nicobar basin has entered into convergent set up following the oblique collision of Burmese plate with the north eastern edge of the Indian plate. Play type - horst graben, wrench related positive flower, transpressional folds. Based on the available information, about 8 - 10 Billion tonnes of prognosticated oil and oil equivalent gas have been estimated for the Indian deep waters. Though the exploration risk may be quite high the associated rewards are expected to be much higher to offset them. The Indian Industry is at the threshold of opening the corridor of these new frontier basins.