

Indian East Coast Basins and Hydrocarbon Play Types

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The East Coast of India has been categorized into seven different basins from north to south. Recognition of these individual basins is based on major tectonic trends and sediment fill types that can be deciphered from gravity-magnetic patterns and seismic imaging. Genetically the East Coast of India represents an Atlantic type passive margin setup that has been evolved through a multiple rift-drift cycles (RD-Cycle).

The rift phases and syn-tectonic sequences have been identified from global plate reconstructions with special reference to East Coast of India. In some cases rift-branches are subdivided into rift zones in ways that are morphologically obvious but mechanically not clear. Usually the zonal boundaries coincide with a pattern expressed in the form of offsets, kinks or major changes in the trends of adjacent rift zones. Phases of rift activity are thus treated as recognizable structural units with well-defined vertical and areal boundaries.

An attempt has also been made to distinguish the hydrocarbon system and play types for both rift related and other structural styles using high quality 2-D and 3-D seismic imaging information. Rift sequences corresponding to pre, syn and post-rift fills have been identified with the mappable events. Structural mapping of half-grabens also reveals cross trends that may control depositional patterns.