The Comparative Study of the Continental Margin Basins of the Northern South China Sea and the Typical Passive Continental Marginal Basins

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After the comparative study on tectonic framework, basin type between the northern continental marginal basins of the continental margin basins of Northern South China Sea and the typical passive continental marginal basins, both of them have some basic characters, such as geomorphology, infilling succession of basin, crust characteristics and dynamics of basin’s formation. Whereas some differences also appeared, such aspects as the characteristics of the spreading ocean basin, the activeness of their own crusts, tectonic evolution, slope morphology, structure style of the basin base. So it is reasonable concluded that the northern continental marginal basin belong to so-called ‘marginal sea’ type para-passive continental marginal basin.

Under the comparison of the hydrocarbon geological features between them, we conclude that the continental margin basins of Northern South China Sea are non-deepwater reservoir basins. Such facts make that the successful deep-water hydrocarbon’s exploration mode abroad can’t applied in most area of the northern part of the South China Sea except for the Zhujiang deep-sea fan. So it is necessary to find a new exploration field.

In fact the frontier uplift and associated slope in complex continental slope setting maybe important and potential hydrocarbon’s perspective field in ‘marginal sea’ type para-passive continental marginal basins., Good hydrocarbon with large scale developed in this zone, Multiple combinations of reservoir and seal system developed. the reservoirs in upper rifting sequence and slow depressing sequence are the best potential deep water exploration area.