

## **Conjugate relations of deep-water hydrocarbon source rocks along the South Atlantic margins**

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The continental margin basins of the East South America and the West Africa share very similar tectonostratigraphic units resulting from their proximity in Late Jurassic- Early Cretaceous time. As a result of the paleogeographic ties among these passive continental margin basins, the relationships of deep-water hydrocarbon source rocks can often be conjugately analyzed.

Characteristics of deep-water hydrocarbon source rocks in these basins obtained from the analysis of 246 deep-water fields which have been found by the end of 2013 [1]. Finally, we identify different deep-water petroleum plays, establish conjugate genetic relationships, and distinguish source paleoenvironments and age.

Shallow marine oils of Albian- Cenomanian are present in Liberia, Cote d'Ivoire, and Keta-Togo-Benin basins of West Africa and Guyana, Foz do Amazonas, Maranhao, Berreirinhas, Potiguar, and Sergipe-Alagoas basins of South America. The source rock is marine shale with type III and type II kerogen, average TOC is 2.1%, and is interpreted as oil-prone. Shallow marine-prodelta oils of Eocene-Miocene are present in Niger Delta basin of West Africa. Source type is a mixture of type II and type III and TOC content averages 1.68%. Lacustrine oils of Valanginian-Barremian are present Salado, Colorado, and Rawson basins of South America and Kwanza, and Southwest African Coastal basins of West Africa. Oil mixing may have occurred in the Bohia, Espirito Santo, Campos, Santos, and Pelotas basins of South America and Douala, Rio Muni, Gabon, Lower Congo basins of West Africa.

[1] IHS. (2014). <https://www.ihs.com/>. 2014-1-5