## Central Atlantic Petroleum Systems

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Multiple Petroleum Systems characterise the Atlantic margins of NW Africa (Senegal to Morocco), SW Europe (Portugal and Spain) and the Eastern Americas (USA and Canada). With much of this region remaining underexplored, application of this information provides a cost effective means of reducing risk in wildcat exploration.

Offshore sources are predominantly associated with Jurassic and Cretaceous clastics with reservoirs positioned up-dip of the kitchens or in the cover succession. An equivalent to the Jurassic to early Cretaceous sourced gas fairway of Nova Scotia remains to be found in NW Africa. DSDP coreholes suggest mid-Cretaceous, oil-prone sources may be restricted to NW Africa. Biomarker correlations suggest carbonate sources associated with the Jurassic shelf edge bank in NW Africa and SW Europe are more abundant than currently envisaged. So far Triassic lacustrine sourced oils derived from the syn-rift succession are only known from the eastern seaboard of the USA.

Contributing onshore source rocks range from Lower Paleozoic to Miocene in age with the greatest variety occurring in Morocco. As is the case offshore, Jurassic and Cretaceous horizons dominate. These include both clastic and carbonate sources, the former tending to be associated with the mid-Cretaceous highstands, the latter with lagoonal settings inboard of the carbonate bank. Silurian sources are developed regionally in Morocco and they offer, in conjunction with Ordovician, Devonian and Carboniferous sources, a range of opportunities, both within the Palaeozoic and as migration products into the Mesozoic. The Neoproterozoic of the Taoudeni Basin (Mauritiania) is attracting attention as a source/seal/reservoir interval.