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**Deep-Water Sedimentation in the West Alboran Basin Since the Messinian as Inferred from Recent 2D Seismic and Swath Bathymetry Data**

ConocoPhillips has recently acquired and evaluated 2D seismic data, swath bathymetry, and dredge samples from the Méditerranée Haute Mer Permit (offshore Morocco) and the Alboraneo Blocks (offshore Spain) of the West Alboran Basin. We report here a study of the well-imaged Messinian to Recent section that we have used in part as an analog for deeper, more prospective reservoirs. Seismic facies analysis shows an evolution of deep-water sedimentation starting with localized debris flows above the Messinian unconformity, followed by Moroccan-sourced turbidite systems in the Lower Pliocene, and then Spanish-sourced turbidites in the Upper Pliocene to Recent. No significant Upper Pliocene to Recent turbidite channels or canyons are observed along the Moroccan margin. Contourites become increasingly important during the Upper Pliocene to Recent throughout the West Alboran Basin, and they dominate the Quaternary-aged sedimentary section offshore Morocco.

Similar to the 8 km-thick, Lower to Upper Miocene stratigraphic interval of the West Alboran Basin, post-Messinian sedimentation was strongly influenced by regional tectonics. The apparent lack of significant Upper Pliocene and younger turbidites offshore Morocco, and the coincident increase in turbidites along the Spanish margin, is likely related to late Lower Pliocene regional tilting of the West Alboran Basin followed by Upper Pliocene to Pleistocene uplift of the Atlas Mountains. Tilting promoted erosion and canyon cutting along the margin of Spain, whereas uplift of the Atlas and Rif shifted much of the northwest African drainage to the Atlantic margin of Morocco.