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Characteristics of Recent Oil and Gas Discoveries in the Deep Water Portion of the Western Nile Delta, Egypt

In 2002 Apache Egypt and partners RWE DEA and BP completed four discoveries in the deep water portion of the West Mediterranean in Egypt's Nile Delta. The first two wells, Abu Sir-1x and Al Bahig-1X, discovered dry gas from the Late Early Pliocene of the Kafr el Sheik Formation. The third well, El Max-1X, recovered gas and gas condensate from the same formation. El King-1X, the fourth well, tested 33 API oil, gas and gas condensate from the Messinian Abu Madi Formation and gas and gas condensate from the Early Pliocene of the Kafr el Sheik Formation. Oil from El King-1X represents the first oil discovered in the deep water portion of the Egyptian Nile Delta. Geochemistry of the El King-1X oils and condensates from El Max-1x is dissimilar to onshore Cretaceous and Jurassic sources and suggests the possibility of Tertiary source rocks capable of generating both oil and gas in the western portion of the Nile Delta. Preliminary biomarker analyses of the El King-1X show broad similarity with other offshore condensates in the area. Although the condensate in El Max is a different API and has a different gas chromatography trace to the El King oil both have broadly similar biomarker data. Dry gas from Abu Sir-1X and Al Bahig-1X is interpreted to be primarily biogenic, although there are indications of a thermogenic component in both wells.