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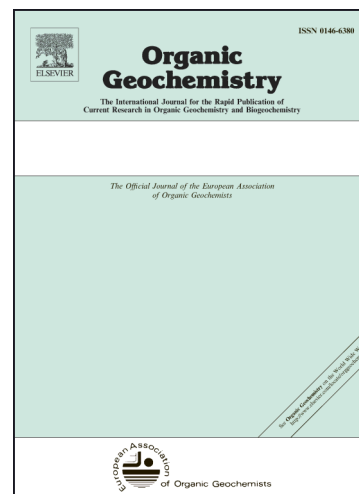
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## Petroleum System Analysis of the Northwestern Part of the Persian Gulf, Iranian Sector

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### Abstract

Geochemical, geological, and geophysical data were used to identify and update genetic oil families, potential source rocks, and hydrocarbon generation kitchen as well as probable migration pathways in the northwestern part of the Persian Gulf. Rock-Eval analysis was performed on 52 cutting samples of prospective Cretaceous-Tertiary source rocks. According to the results, most of the samples have poor to fair potential for hydrocarbon generation, except for the Albian Formation possessed good to excellent source rock characteristics in the study area. Two genetic oil families were identified based on source- and age-related biomarkers as well as stable carbon isotope ratios for 23 crude oil samples. Family I occurs in the upper Jurassic-lower Cretaceous reservoirs mainly in the Surmeh-Hith Basin whereas family II occurs in the lower Cretaceous-Tertiary reservoirs mainly in the Garau-Gotnia Basin.

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