Petroleum Systems Modelling in Algeria and Its Implications in Terms of Lithospheric Speculation and Vertical Movements

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Petroleum systems modelling suggests that maturation of the Silurian source rock in the part of the Oued Mya Basin to the west of the Hassi Messaoud field took place during Upper Cretaceous to Paleogene time, but further south in the area west of the Gassi, Zotti and Agreb fields it is older and rendered the source rocks overmature before the beginning of the Mesozoic. Basin modelling suggests that there was an additional influx of heat to the lithosphere in the south which has since decayed away, yet there is precious little sign of significant rifting in the area. Like other structures in cratonic Algeria, the Gassi, Zotti and Agreb fields are very subtle and gentle. They were not strongly affected either by extensional faulting, or the limited Late Cretaceous and younger inversion that post dated it. The really impressive tectonism that occurs in cratonic Algeria is the relative elevation and depression of extensive areas through time. Analogies are made with Precambrian rocks elswhere in the world.

Key words: Algeria, modelling, lithosphere, tectonism.