

Well Log Sequences Stratigraphy and Potential Reservoirs of Wells KF-1 and KF-2; Kribi Oil Field, Douala-Kribi-Campo Basin, Cameroon

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Abstract : Background and aim: An integrated interpretation of wireline logs and lithology of two selected wells (KF-1 and KF-2) of Kribi oil field within the southeastern offshore Douala/Kribi Campo Basin was carried out for sequence stratigraphic analysis of sediments penetrated by the wells. Methods: The stratigraphic units within the wells were subdivided into depositional sequences using characteristic well log patterns that were deposited between Tertiary Miocene to lower Cretaceous. Results: Nine (9) and eight (8) depositional sequences were identified respectively for KF-1 and KF-2. The sequences comprise LST (progradational packages), TSTs (retrogradational packages) and HSTs (aggradational packages), which reflect depositional systems deposited during different phases of base-level changes. The (LST) consists of Basin Floor Fans (BFF), Slope Fans and Channel Sands deposited when sea level was low and accommodation space lower than rate of sediment influx. TST consists of retrogradational marine shales deposited during high relative sea levels and when accommodation space was higher than rate of sediment influx. HST consisted of shoreface sands displaying mostly aggradational to progradational stacking patterns. Conclusion: The rapid facies changes between successive systems tracts provide potential stratigraphic traps. Reservoir stratification and continuity vary greatly between systems tracts and this enhanced development of stratigraphic traps in the area. Basin floor fans comprise sandstone of good reservoir quality, thus huge accumulation of HC can be trapped in this reservoirs.

Keywords : Douala-Kribi-Campo Basin, reservoirs, sequence stratigraphy, system tracts

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