Reservoir Modeling "Big Loop" Workflow Applied to the Deepwater Reservoirs

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ABSTRACT

Building reservoir models that honor complex deepwater reservoir architecture and predict reliable and accurate forecasts can be quite challenging. Multi-year reservoir characterization, modeling, history-matching and simulation studies are typically undertaken with the objective to optimize future well placement and to make reservoir management decisions. The tight integration of these three subsurface disciplines, also known as the "Big Loop", is instrumental in bringing high confidence to project decisions. Multiple Big Loop iterations are needed to reconcile dynamic production data with static reservoir characterization, and to reach a cross-functional understanding of static and dynamic deepwater reservoir connectivity and the impact on production.