Case Study on Pragmatic Utilization of Multiple Realizations to Understand Reservoir Performance in a High Permeability Aquifer Supported Reservoir System, Etame Marin Permit - Gabon

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The Offshore Etame Marin Permit is operated by Vaalco Gabon being other co-ventures Addax Petroleum, Tullow Oil, PetroEnergy and Energy Resources Japan. Current production in Etame is about 24000 bopd and water production approximately 5000 bpd. The cumulative production is 50 MMbbls from the three fields that have been developed, Etame, Avouma/South Tchibala and Ebouri. The water depth range from 60 at the northern boundary to more than 150 meters at the southern boundary approximately 800 kilometres offshore.

The Gamba Sandstone is the primary reservoir with excellent reservoir quality (25%-30%) and multi-Darcy permeability. The greatest uncertainty in reservoir quality is reflected in the Dentale Sandstone reservoir, where limited data control leads to interpreted sand-shale distributions and their connectivity

A multiple realization model approach has been developed for a better understanding of the reservoir dynamic.