

**AAPG Annual Meeting  
March 10-13, 2002  
Houston, Texas**

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## **Accommodation Space in a Fluvial Meandering Process-based Stochastic Model**

We combined process-based and stochastic approaches to model meandering stream floodplain formation at the scale of the oil reservoir. Many different realistic realizations for the same deposits can then be generated. The parameters controlling our model are essentially geological (lithology, structure and nature of alluvium) and geomorphological (channel morphology, flow characteristics...). In this context, how can the concept of accommodation space be linked with these key parameters and what is the impact on the nature and spatio-temporal distribution of the deposits?

The accommodation available for sediment accumulation is controlled by the elevation of the channel, its bankfull depth and the nature and intensity of overbank floods. The formation of floodplain is the product of the interaction of the accumulation of vertically accreted sediment and lateral reworking. Understanding the relationship between both processes is critical to explain how the architecture and composition of alluvial suites can change in response to allocyclic or autocyclic controls. For example, low intensity and frequency for overbank flood makes that the channel has the time to migrate all over its floodplain thus sandy point-bar deposits are preponderant. On the contrary, frequent overbank floods lead to quick vertical aggradation of the floodplain, thus leading to the deposition of a great proportion of clayey material.

At this stage, our modeling provides an interesting way to study the relative impact of autocyclic control in regards of allocyclic controls on the available accommodation space.