

Title: Paleogeographic evolution of the Orange and Green sands in WR 313, Deep-water Gulf of Mexico.

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The Orange and Green sands in Walker Ridge Block 313 are hydrate-bearing reservoirs located in the Terrebonne mini-basin in the deepwater Gulf of Mexico. In the lower (Green) interval, a channel system prograded and aggraded to the mini-basin margin and thereafter incision occurred. The Green sand is a levee deposited by the channel system that caps this interval. The channel is oriented NW-SE and flowed towards the SE where salt-related uplift took place. In the overlying (Orange) interval, the channel is still present and it continues to aggrade. However, the Orange interval is capped by a blocky sand (the Orange sand) that I interpret to record regional deposition of a sheet sand that is unrelated to the channel itself. After deposition of the Orange sand, the channel incised and reworked the Orange sand as it continued to aggrade. The WR 313 H well penetrated the levee deposits on the northeast flank of the channel. The GR log and Resistivity logs from the H well record two coarsening upward signatures several feet apart which are interpreted as the Green sand and the Orange sand. The WR 225 001 well records a coarsening upward GR signature that confirms the presence of the Orange sand towards the north, into the broader Terrebonne mini-basin, and further away from the channel. This study shows how seismic stratigraphy can be used to understand the influence of salt-related tectonism on active sedimentary depositional and erosional processes.

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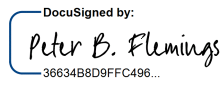
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