

## **MUDDY AND SANDY CONTOURITES INSIDE TURBIDITE RESERVOIR BEDS IN THE CAMPOS BASIN, BRAZIL**

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Cores retrieved from sandstone lobes of an oil-producer tertiary turbidite system of the Campos Basin show three main lithofacies: mudstone, sandstone and diamictite. Sedimentological analysis of these facies indicate that mudstone and some sandstone beds were formed by bottom-current action, whereas most of the sandstone beds and the diamictite have been formed by gravity flows, comprising respectively turbidite and debris flows. Turbidite is the predominant sandstone facies, consisting on arcosean medium to very fine-grained sand beds, about 0.3m thick, with erosive base, fining-upward and predominant parallel stratification. The top of the beds are always truncated at the level of the transition from fine to very fine-grained sand. The truncated top of the turbidite beds are either covered by mudstone or by thin layers (8cm) of very fine-grained sand with piled, erosive, truncating current ripples, with some granule lag at their base. The thin sandstone layers with piled erosive current ripples are considered to be the product of bottom-current reworking of the turbidite beds. The most abundant facies presented on the cores are the background facies, the mudstone, which is highly bioturbated, mainly planolites. The coarse fraction of the mudstone is composed of silt-sized quartz-feldspar grains and variable amounts of sand-sized foraminiferal tests. The observed vertical cyclicity of coarsening and fining upward inside the mudstone beds is associated to the relative of abundance of foraminiferal tests, which could reach more than 50% of the grain volume.