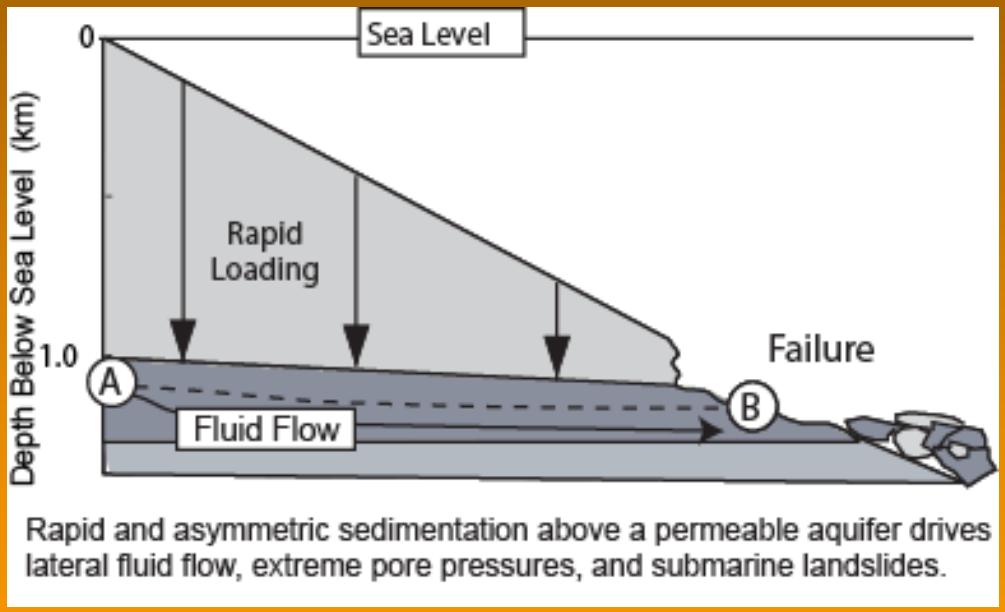
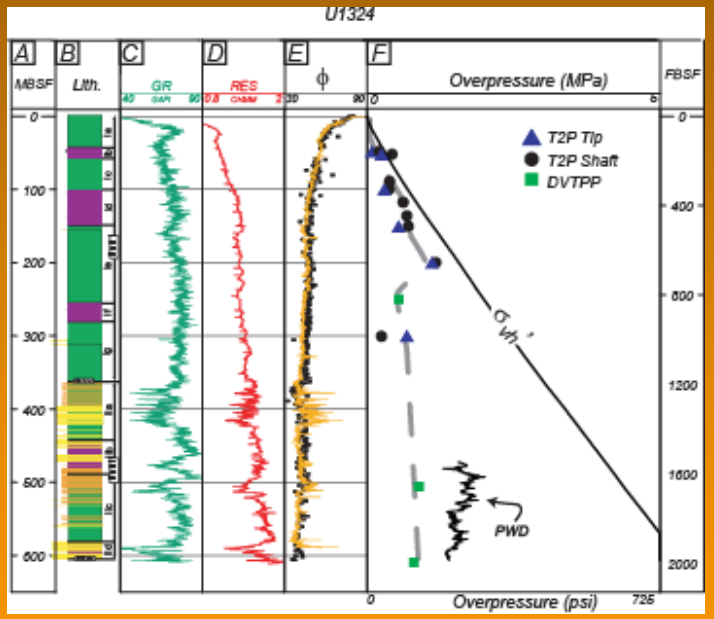
Overpressure and Slope Stability in the Deepwater Gulf of Mexico

Peter B. Flemings, Jackson School of Geosciences, University of Texas, Austin
pflemings@jsg.utexas.edu

Integrated Ocean Drilling Program (IODP) Expedition 308 examined how rapid and asymmetric sedimentation above a permeable aquifer drives lateral fluid flow, extreme pore pressures, and submarine landslides.



Rapid and asymmetric sedimentation above a permeable aquifer drives lateral fluid flow, extreme pore pressures, and submarine landslides.



Left: *We tested a conceptual model of how sedimentation drives flow laterally in permeable aquifers, reduces effective stress, and induces submarine landslides.* ***Right:*** *Results from the Gulf of Mexico. Lithology (B) and Pore pressure (F) in the Ursa Basin, deepwater Gulf of Mexico, at IODP Site U1324. We found high overpressure (0-200 mbsf) where there are significant submarine landslides (purple zones in (B)).*