



# GEOGULF2021

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## Hiatus Mapping in Texas

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### ABSTRACT

It has been proposed that Texas experienced uplift and tilt during the latter part of the Cenozoic based on onlapping strata and truncated sequences. The precise timing, spatial extent, and amplitude of these vertical motions, as well as their dynamic causes, remain poorly constrained. We propose to analyze regional-scale unconformities from geologic maps and regional cross-sections of Texas to compile hiatus maps at spatial scales of many hundreds of kilometers and at temporal scales of geologic epochs. This will be complemented by the analysis of subsurface geometries and by a quantitative assessment of the role of post-rift thermal subsidence and lithospheric flexure induced by sediment loading. Our analysis will put additional constraints on the timing and amplitude of tilting, refining our knowledge of the tectonic history of Texas. Additionally, we will be able to assess whether changes in dynamic support from the convecting mantle are required to explain these past vertical motions of the Texas lithosphere.

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## NOTES

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