

# Permian Basin Research Lab at UT Dallas

Dr. Robert J. Stern and Mr. Lowell Waite, Co-Directors

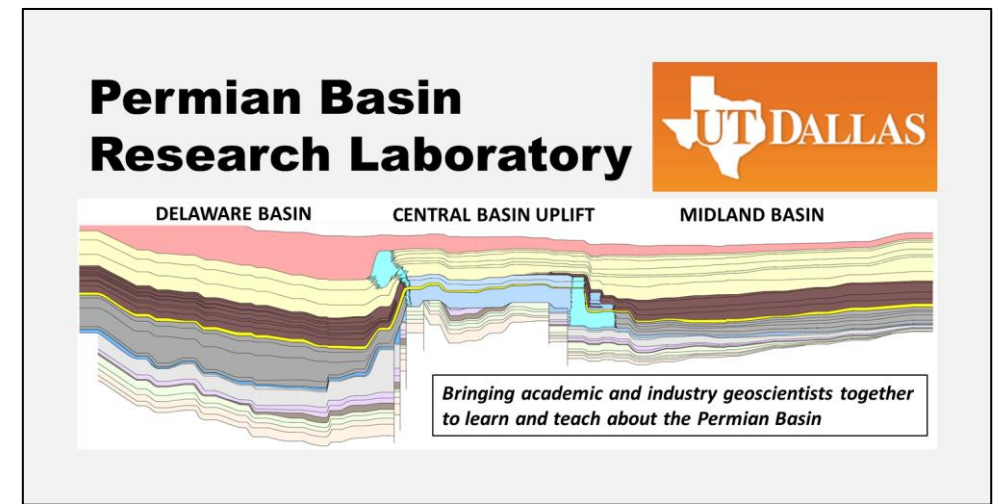
-- established January 2019 --



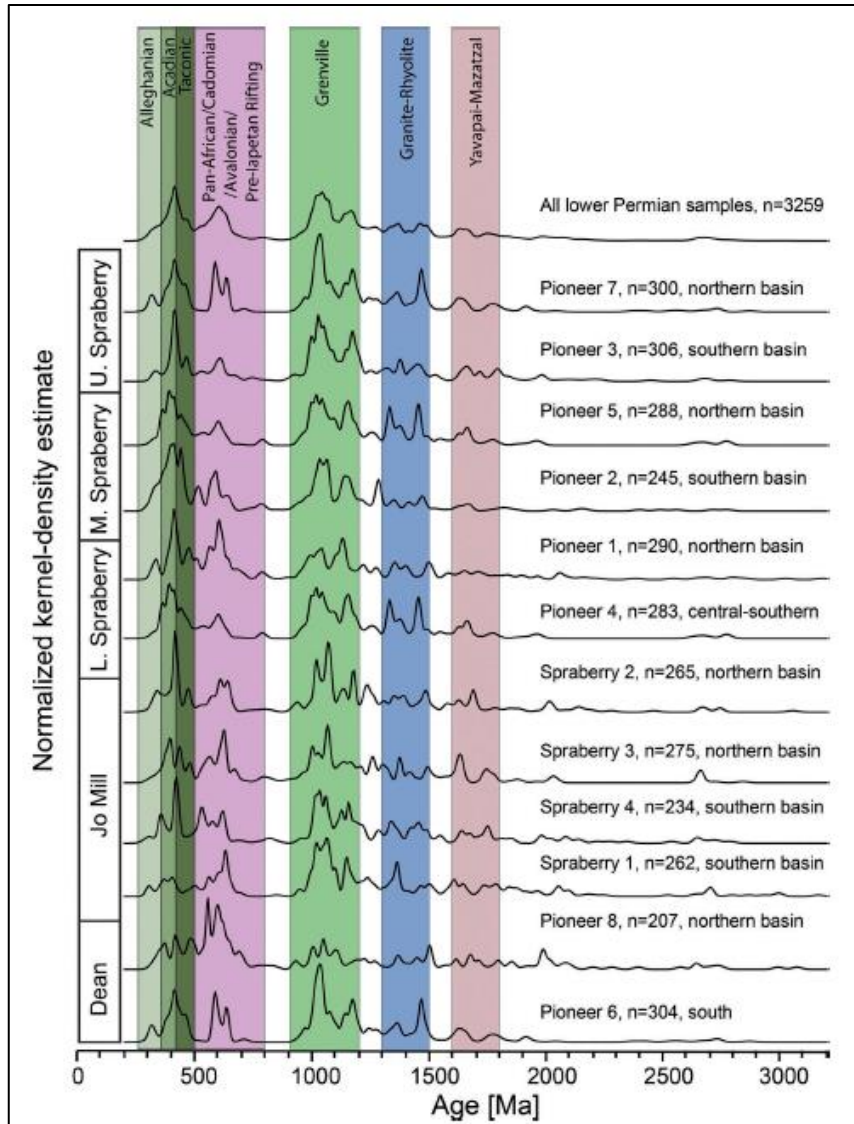
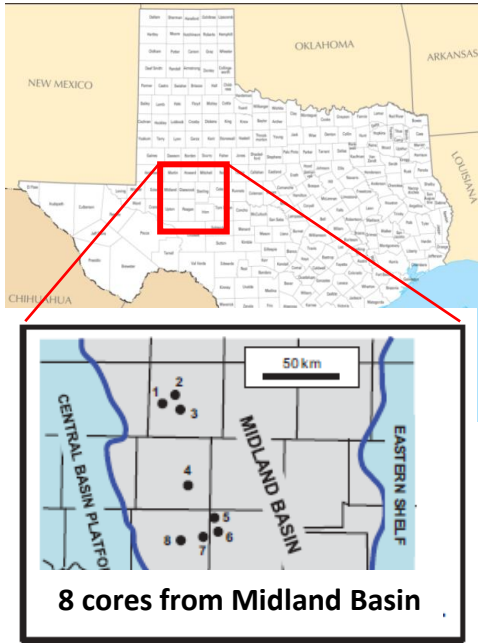
## Goals:

- Advance understanding of all geologic aspects of the Permian Basin through open applied research, **linking academia and industry** (e.g., Pioneer, Scout, EOG, Silverhill, Monadnock, Endeavor)
- Educate and provide skills to students interested in careers in industry (experience w/ subsurface data sets)
  - Graduate courses offered:
    - Geology of the Permian Basin
    - Petroleum Geoscience
    - Paleo Earth Systems: Global Themes
    - Carbonate Sedimentology
    - Clastic Sedimentology/Sequence strat (Dr. Harper)

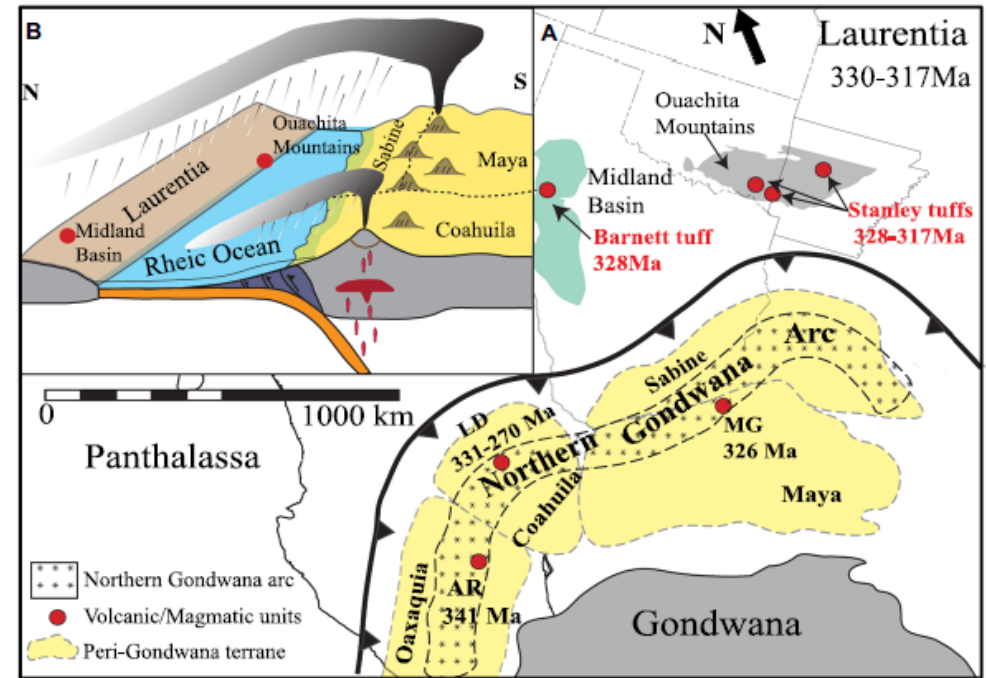
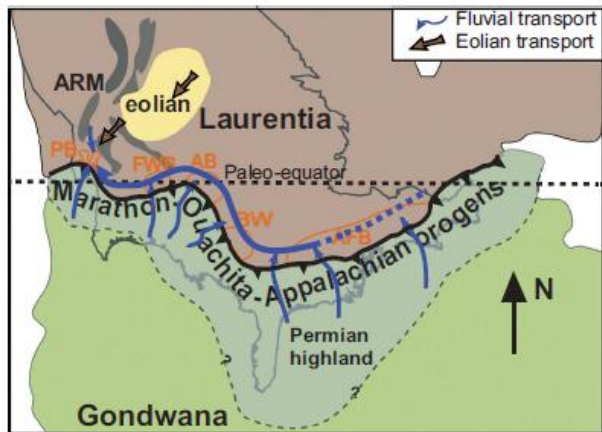
<https://labs.utdallas.edu/permianbasinresearch/>



# UTD PBRL: Recent research results\*



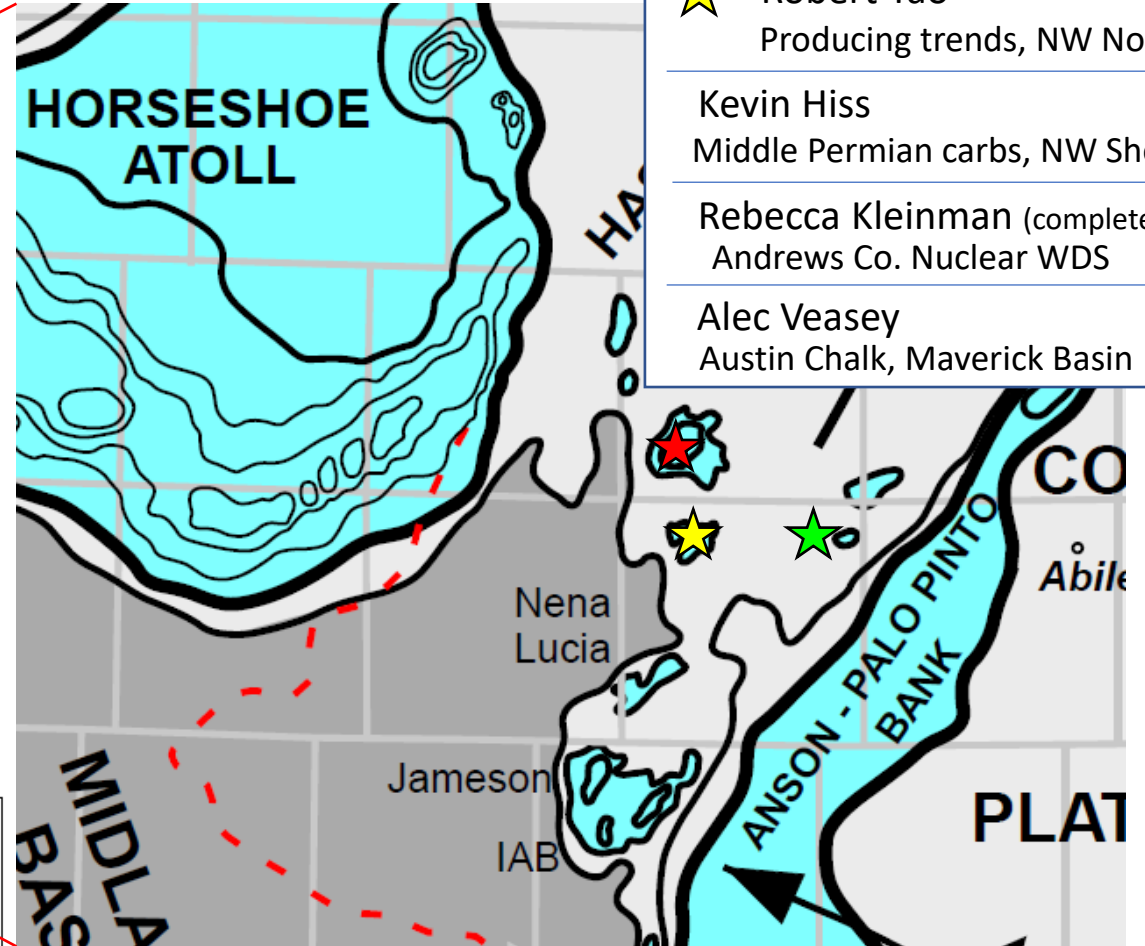
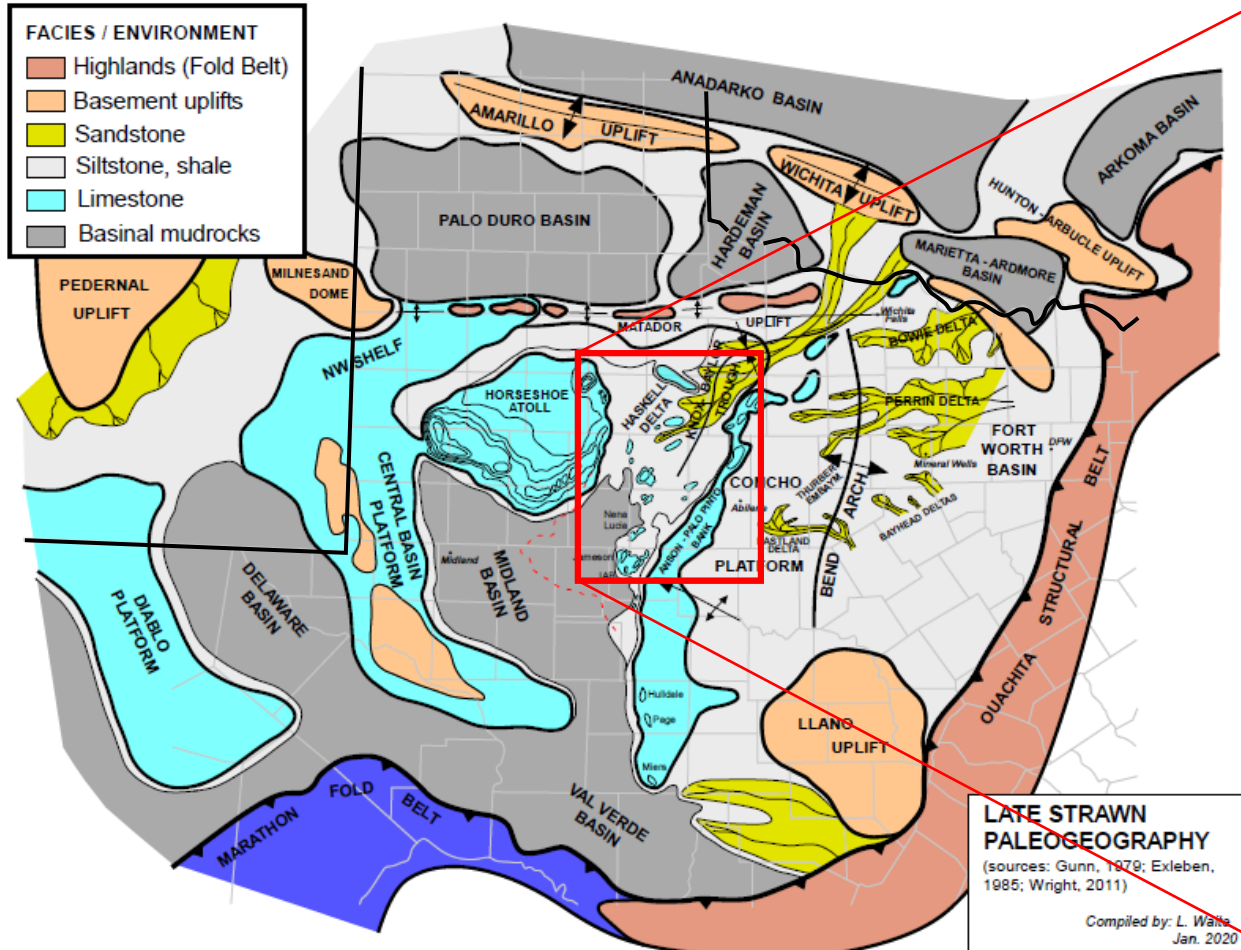
- Age-dates of > 3200 zircon samples from early Permian (Spraberry-Dean) deep-water clastics indicate major WSW-directed river system draining Appalachian, Gondwana, Granite-Rhyolite, and Grenville terrains
- Thin (3 cm-thick) volcanic tuff of Early Mississippian/Barnett shale age in Midland Basin correlates to thicker Stanley Tuffs in the Ouachita Mtns, linked to a northern Gondwana continental arc and granitoids from Maya Block
- Analyses of numerous early Permian tuffs from Midland Basin Block indicate two separate N. Gondwana arcs



\*with UTA and Pioneer

# UTD PBRL: Ongoing research

- Characterization of Late Pennsylvanian carbonate – clastic sedimentary systems, Eastern Shelf of the Midland Basin



## Current M.S. projects

- ★ Aldwin Vazquez  
Lower Strawn, NE Nolan Co.
- ★ Alex Gonzalez  
Claytonville Canyon reef
- ★ Robert Yao  
Producing trends, NW Nolan
- Kevin Hiss  
Middle Permian carbs, NW Shelf
- Rebecca Kleinman (completed)  
Andrews Co. Nuclear WDS
- Alec Veasey  
Austin Chalk, Maverick Basin