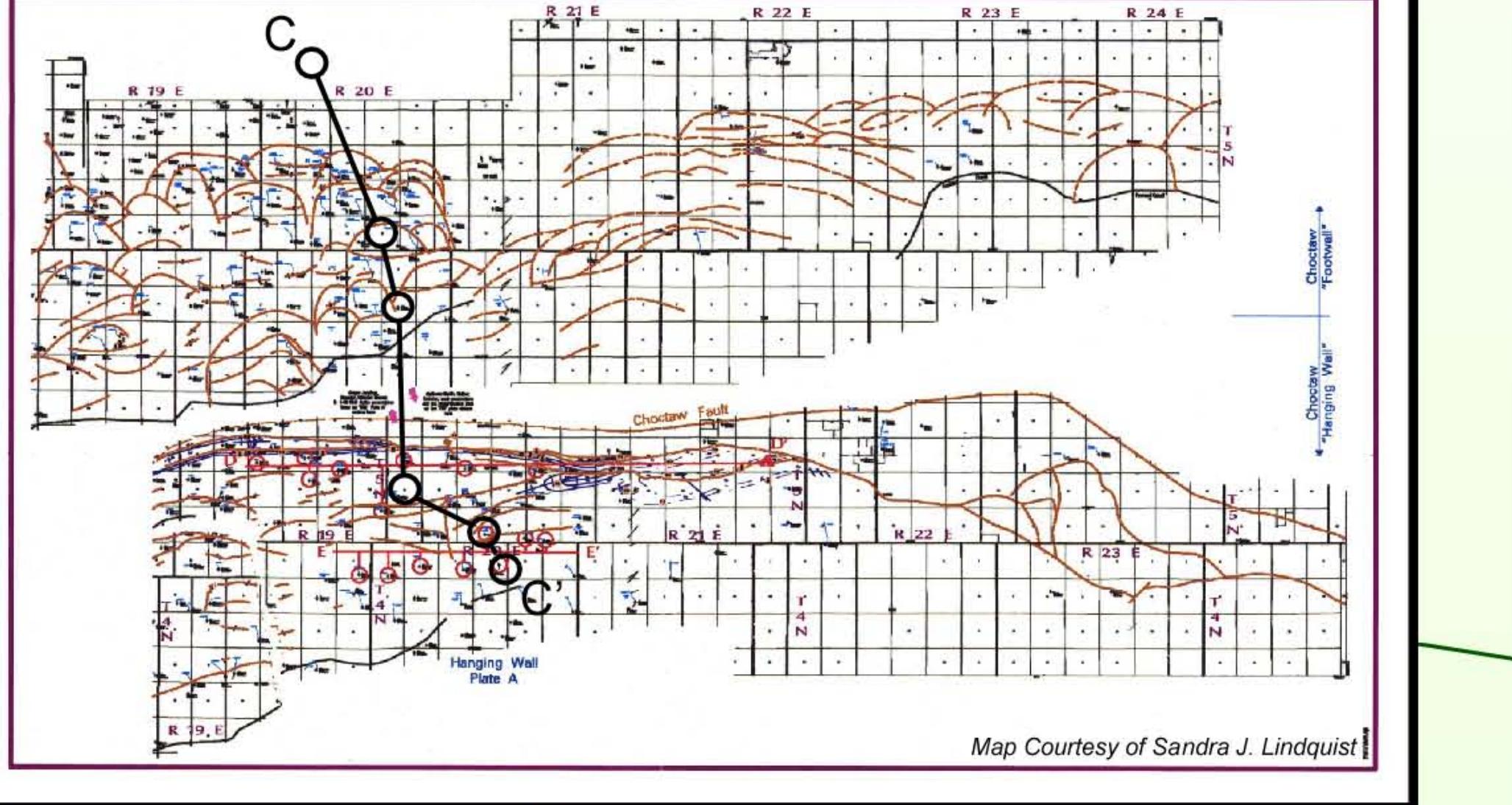
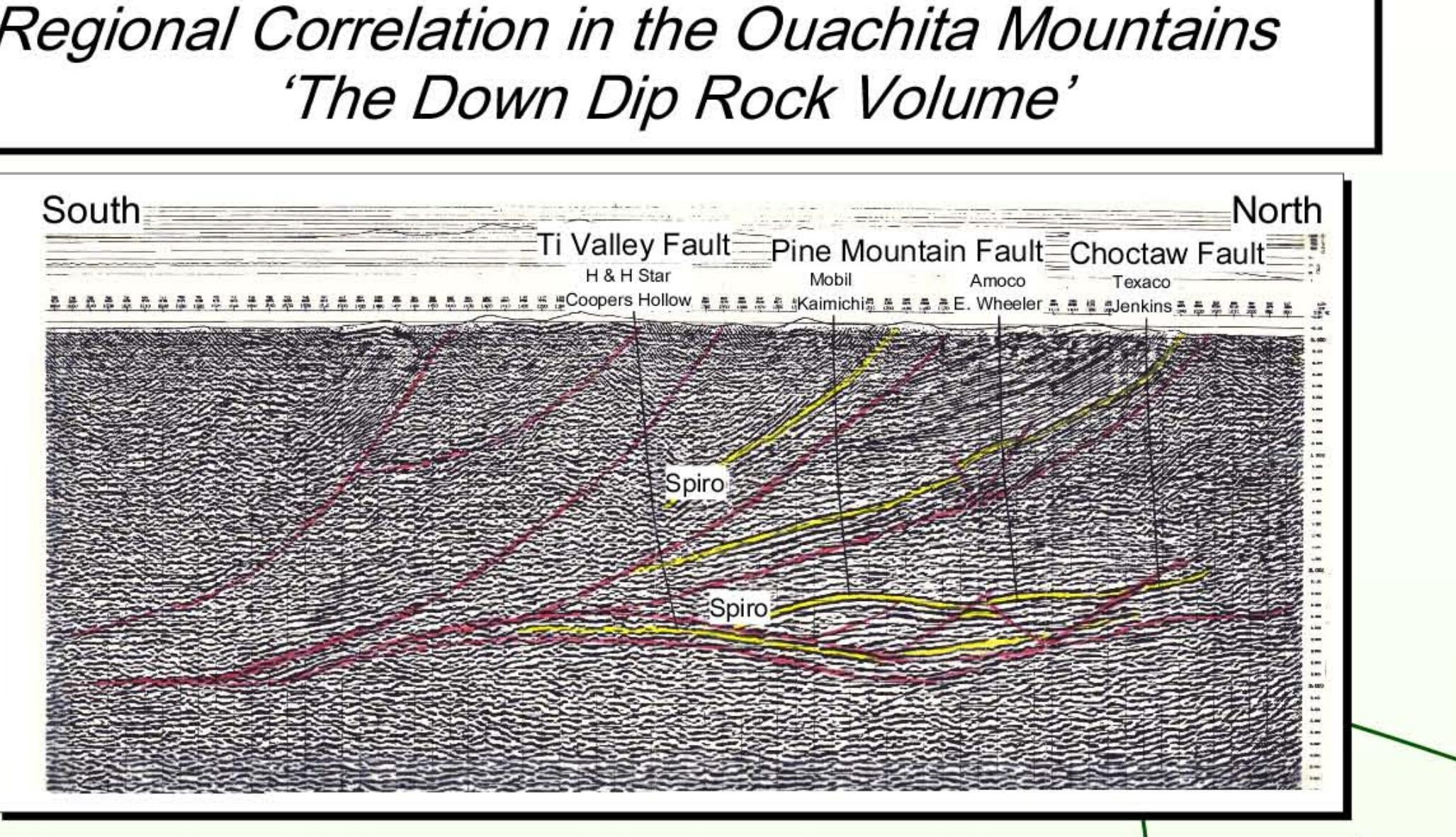
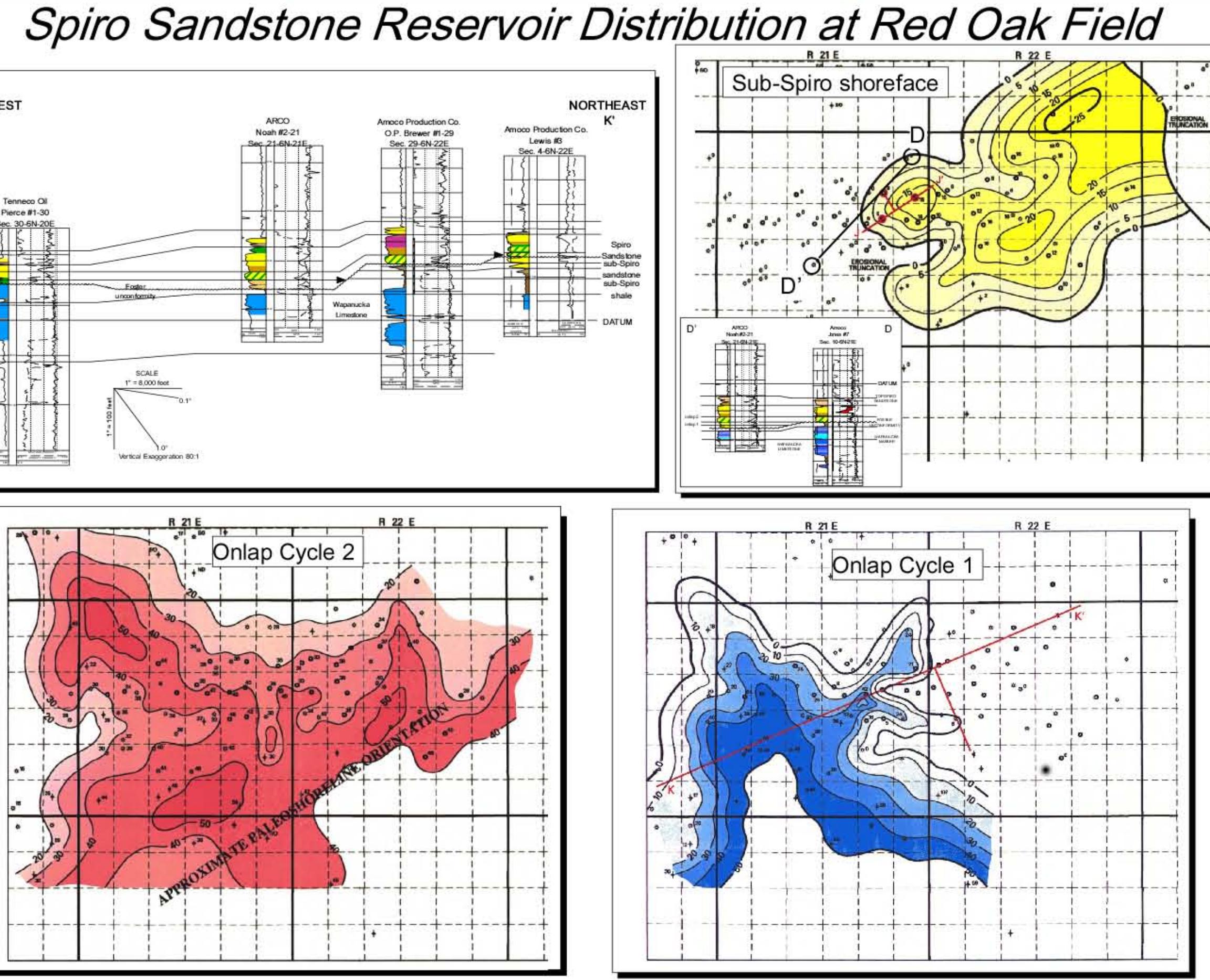
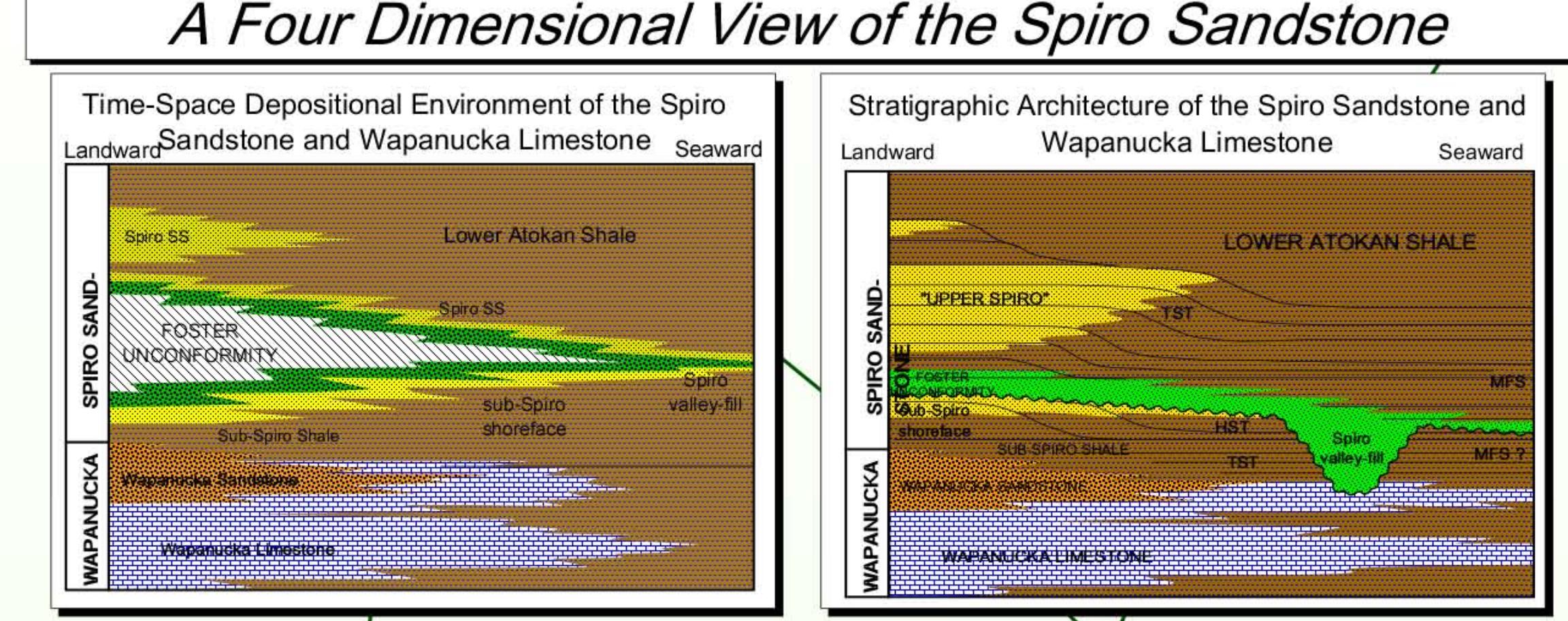


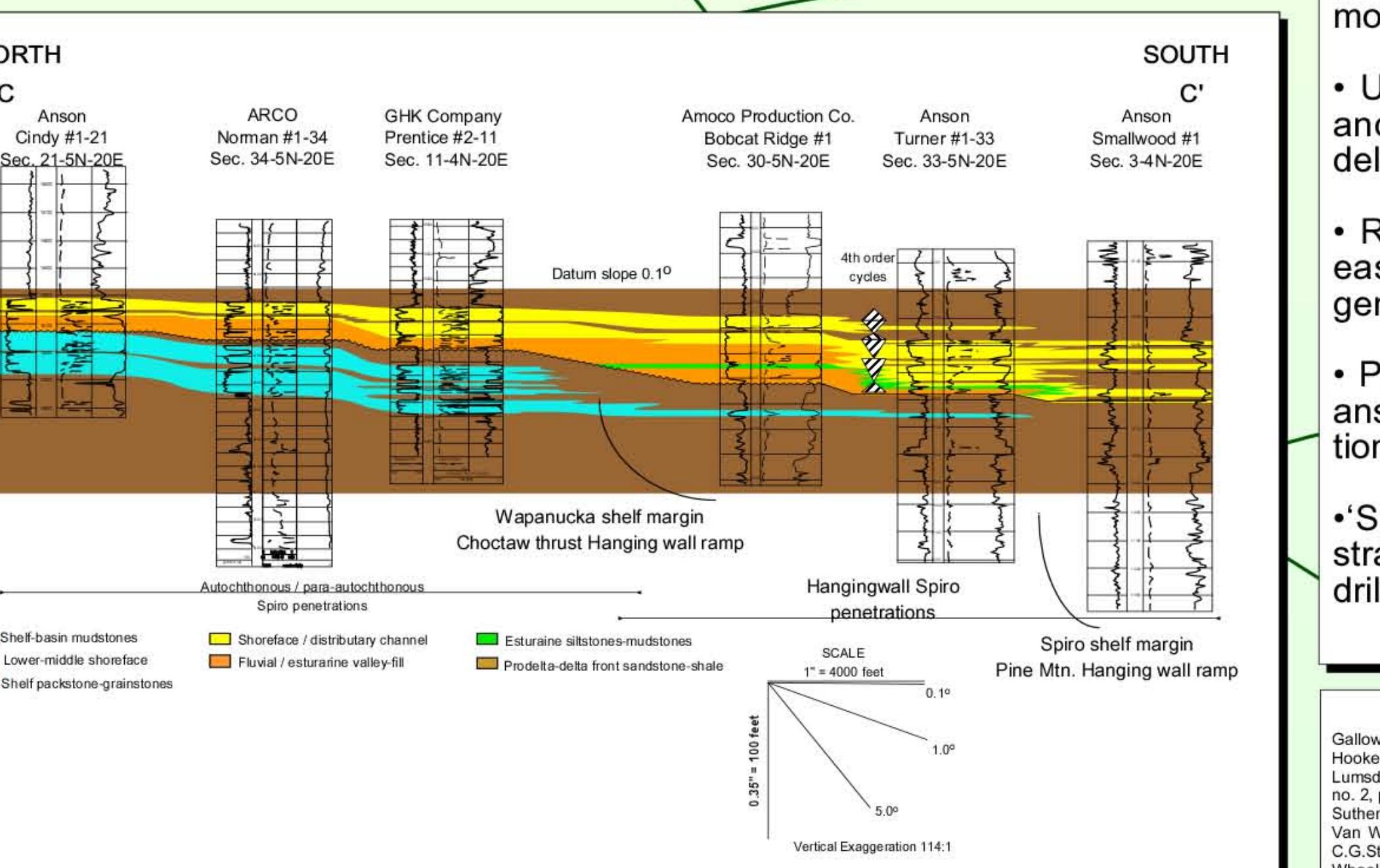
- Correlations of the sub-Spiro shale demonstrate the lower 'Wapanucka sandstone' is a genetically related to the siliciclastic facies tract of the Wapanucka Limestone.
- Sub-Spiro shale can be correlated laterally for tens of miles and contains coarsening-upward marine shoreface successions of the sub-Spiro sandstone.
- Foster unconformity (sequence boundary = SB) overlies sub-Spiro shoreface cycles.



Identification of the Spiro incised valley trends in the up-dip areas suggests coeval strata are located outboard in fold-and-thrust belt. A palinspastically restored map of the Choctaw Thrust places repeated Spiro penetrations in proximity to their original depositional position (cross section C-C') enabling correlation of the down dip deltas and shoreline with the up-dip surface. Spiro 'lowstand deltas' are present in the hanging wall of the Choctaw and Pine Mountain Faults.



- ### Conclusions
- Rocks are fundamentally four dimensional. A fact that is often overlooked in many correlations and models.
  - Understanding time-space distribution of surfaces and rocks on a regional scale makes exploration and exploitation strategies more effective. Structural reconstructions in the fold-and-thrust belt may delineate undrilled Spiro reservoirs.
  - Recognition of the sub-Spiro shale and its genetic relationship to the Wapanucka Limestone to the east and the sub-Spiro sandstone to the north is key to understanding both Wapanucka and Spiro genetic sequences and their regional correlation.
  - Placing differing interpretations in the time-space domain helps focus areas of additional research to answering questions surrounding the prediction of reservoir presence and the utility of different depositional models.
  - 'Spiro' sandstone reservoir development occurs in four distinct genetic sequences that are often stratigraphically or structurally juxtaposed. Understanding this relationship will influence development drilling decisions.



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