

Sequence Stratigraphy, Reservoir Distribution, and Diagenesis, Cleveland Sandstone, Western Oklahoma

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The Cleveland Sandstone in western Oklahoma has not been intensely studied or interpreted in a sequence-stratigraphic framework. It is an important oil- and gas-producing reservoir in the Anadarko Basin. However, the spatial distribution of Cleveland sandstone bodies is not well understood and in Oklahoma the sandstone has not been interpreted using sequence stratigraphy. These sandstones have relatively low porosity and permeability and have potential to be economical oil and gas reservoirs. The characteristics that this sandstone exhibits make most vertical wells marginally economic. However, horizontal drilling is proving that the Cleveland Sandstone can be produced economically. Interpreting the Cleveland Sandstone within a sequence stratigraphic framework will help improve the placing of laterals and enhance exploration success; making what was becoming a less sought after reserve, due to low return on investment, a much more reliable resource.