

Viola, Simpson, and Arbuckle Group Exploration - Oklahoma and Adjacent Areas

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ABSTRACT

Isopach, porosity, and production maps of Viola, Simpson, and Arbuckle reservoirs, and a Viola structure map from Suhm (2016) can be used to identify areas of potential stratigraphic traps at pinch outs of Oil Creek, McLish, Tulip Creek, and Bromide sandstones of the Simpson Group and Seminole Sandstone (1st Wilcox) of the Viola Group. Critical structural control is provided by a state-wide Viola structure map based on thousands of miles of seismic data (Suhm, 2016). This map also shows subcrops, “buried hills,” and, for the first time, Viola structure beneath thrust sheets of the Ouachita Mountains.

Reinterpretation of basin development, paleogeography, and paleotectonics has resulted in expansion of karsted Arbuckle targets to nearby areas of northeast Texas and Louisiana previously deemed non-prospective for hydrocarbons. Maps and report by Suhm (2016) are located in <http://ogs.ou.edu/docs/openfile/OF3-2016.pdf>, and, <http://ogs.ou.edu/docs/openfile/OF3-2016P.zip> and <http://www.ou.edu/content/ogs/education/workshops/simpsonplay.html>