

THE TUSCALOOSA-WOODBINE TREND: TRACKING ITS UNIQUE PRESSURE PROFILES

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ABSTRACT

The current drilling play in the Tuscaloosa trend across central Louisiana from Baton Rouge eastward through Lake Ponchartrain and the Rigolets, and westward into east and central Texas, is perhaps the most exciting concentrated, inland boom since "Dad" Joiner discovered the East Texas field in 1930.

Although these 20,000-foot wells may cost \$10 to \$20 million to drill and complete, the extraordinary porosities (28 percent) and permeabilities (200 md) of the Tuscaloosa sands are so rewarding that these wells can pay out in 90 days. Unfortunately, a high proportion of these expensive wells are never completed — largely due to pore pressure problems.

The major drilling problems are caused by pressure imbalance — either too much or too little mud density in relation to the changing formation pore pressure(s).

The pressure profiles of these Tuscaloosa wells are rather unique, by traditional Gulf Coast standards, and require unique tracking techniques. Pressure interpretation from a single logging parameter is almost hopeless because of the many trend-line shifts. But when several different pressure-monitoring parameters are plotted side-by-side, in a "Pressure Evaluation Profile," pressure interpretation becomes more reliable.

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