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100% of the Wells, 100% of the Time: Visualization of Thin-Bedded Onshore Gas Reservoirs

Drilling of Tight and thin-bedded reservoirs can often be a game of battleship. It needn't be, even for 15' sands at 10,000 feet. Proper identification and targeted drilling can make every well count, every time. Regulated drilling programs often dictate well spacing at a specified interval such as 10, 20 or 40 acre spacing. However, the subsurface and depositional can be anything but regularly spaced. In the image above only one well out of twenty found the channel sand. To be fair the drilling program was targeting multiple pay zones without the benefit of 3D seismic. Proper imaging, attribute analysis and modeling can increase the effectiveness of each well and potentially reduce the number drilled.

The theme of this talk will be to show how specific seismic attributes, in particular spectral decomposition, are useful in imaging and defining thin-bedded onshore reservoirs. Examples from multiple areas within the Uinta Basin will be used to show a complete workflow and the application of this powerful technology. Additional technology will show how rapid reservoir fluid flow modeling of the potential reservoir can aid in the location and type of drilling program.