

Executive Summary: SE Oklahoma Jackfork

Play Concept:	Pennsylvanian turbidite sandstones trapped in thrust-fold anticlines beneath the Windingstair Fault
Drill Depth:	13,000' – 16,000' PTD
Reserve Potential:	500+ BCFG
Primary Reservoirs:	Pennsylvanian Jackfork Group sandstones
Secondary Reserves:	Mississippian Stanley Group sandstones

Geologic Overview:

Jackfork Group sandstones have produced nearly 400 BCFG beneath the Windingstair Fault in Potato Hills Field in Latimer Co. The trap consists of an anticlinal thrust fold that is internally faulted and fractured. Average producing depth is about 5,000'. The deepest Jackfork production in the field occurs at 18,300' MD. Jackfork Group sandstones are also productive further north in Latimer in a back-limb structural position on stacked thrust-fold anticlines.

2D and 3D seismic data indicates the presence of stacked thrust fold anticlines beneath the Windingstair Fault south of Potato Hills beneath the Lynn Mountain, Boktukola and Bethyl Synclines. These “subthrust” imbricates have been removed by erosion in the core of the Ouachita Mountains along the Benton-Broken Bow Uplift. They continue south of the uplift extending beneath Cretaceous sediments of the Coastal Plain.

Deep drilling in Potato Hills Field has confirmed that the decollement separating Ouachita Facies rocks (i.e., Jackfork, Stanley, etc.) from Foreland Facies rocks exists below 19,000' MD. The detachment extends south of the Benton-Broken Bow Uplift carrying Jackfork sedimentary rocks in the hanging wall. Jackfork sub-thrust anticlines (Potato Hills-type structures) may exist across the prospect at moderate drill depths.

Weyerhaeuser Data Summary

Seismic: Approximately 60 miles of 80's vintage 2D data (portions of 8 lines). A 50-square mile 3D seismic survey in the Boktukola Syncline area. TGA and state surface geologic maps. Well data and outcrop studies (SOHIO exploration program).

Reserves: 275+ BCFG based on Potato Hills field analog.

