

**STRUCTURAL/STRATIGRAPHIC RECONSTRUCTION OF  
FRONTAL "CHOCTAW" TRIANGLE ZONE WITHIN OKLAHOMA  
ATOKA TREND - EARLY CONTROLS (PRE-THRUSTING) ON  
DEPOSITION OF DEEP WATER CLASTIC RESERVOIRS**

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**ABSTRACT**

A structural and stratigraphic study in S.W. Oklahoma, encompassing approximately 30 townships in Atoka, Coal and Pittsburg counties, was completed, using several hundred wells, surface geologic maps and more than 400 miles of 1980's vintage seismic data. Isopach maps were made of six Atokan sands, covering various areas, all within a deep water fan setting. Structural balancing was carried out on numerous geologic cross sections of six miles or less, for log correlation of the various reservoirs and structural details within the frontal "Choctaw" triangle zone. Two regional cross sections were made based on 12 and 16 miles, respectively, of recent high fold CDP seismic lines, with a minimum of one well per mile control, dipmeter data and surface geology. These cross-sections were reconstructed by line balancing, to illustrate the amount of thrusting in the section and the pre-Penn normal faulting that subtly control the Atoka sands depositional framework. The thickest and most channelized sands are found downthrown to these earlier faults, with this past relationship now obscured by post-Atokan thrusting.

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