

Explore the Published Strike-Slip Faults

Rudolph P. Wilkinson¹ (1) The Daube Co, Ardmore, OK

Reverse faulting near the edge of a stratigraphic boundary can create a false image of a strike-slip fault. The Washita Valley fault might be an excellent example of such a fault. If, in fact, the Washita Valley fault is a reverse fault and not a strike-slip fault, then the Arbuckle Mountains may overlie some unexplored oil and gas prospects.

The Washita Valley fault is adjacent to two of the most prolific fields in southern Oklahoma: The Eola field and the Cumberland field. These two fields have each produced approximately 850,000 barrels of oil per well. The fields are approximately 70 miles apart, and may be indicative of a structural trend that has not yet been fully explored.

One way to determine the difference between a reverse fault and a strike-slip fault is to examine the direction of force that produced the fault. The force that creates a strike-slip fault is 90 degrees opposite in direction from a force that will create a reverse fault. A study of the Washita Valley fault strongly supports the reverse fault concept.