
**THE STRUCTURAL AND STRATIGRAPHIC HISTORY OF THE
CHANDLER AREA OF LINCOLN COUNTY, OKLAHOMA**

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This presentation advances concepts of earth structure which include:

(1) A northwest-southeast and northeast-southwest intersecting pattern of lines of deformation of early crustal origin, both regional and local, in which one or the other may be the dominant trend at different places and at different geological times.

(2) A system of arcuate structural lines of deformation of different ages of origin, from early Precambrian to recent times.

(3) Expressions of north-south and east-west deformation, often of post-Carboniferous age; there is some evidence that some of this deformation may actually be a phase of the arcuate deformation of (2) and that it has combined with the fundamental lines of (1) to form structural arcs.

In these concepts it is held that in the fundamental pattern, local structures were formed at intersections and that these structures of the early crust persisted with the growth of the crust and became accentuated with regional deformation of the crust, whether uplift or downward. Furthermore, it is held that where structures occur along arcuate lines of deformation, these are localized by the intersection of the fundamental lines of deformation with the arcuate lines.

It is also held that the processes of sedimentation which bring about the accumulation of organisms or organic remains and local variations of sediments which result in oil and gas pools are associated with local irregularities on the sea bottom and that these irregularities have their origin in local structural features formed in association with the earth structural systems outlined above.

The Lincoln County, Oklahoma area has in it structural features which illustrate these concepts and oil and gas pools related to these features. These relationships have been brought out by a series of structural and interval maps which serve as a lead to the application of the concepts to exploration for oil and gas in other regions and areas.