An Eastern Oklahoma Stratigraphic-Legacy Preserved

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A collection of 500 meticulously correlated paper cross sections extending from Southeast Kansas to the northern part of the Arkoma Basin in Eastern Oklahoma was donated to the Tulsa Geological Society by the family of J. Glenn Cole who died in 2008. It was the desire of members of the TGS to preserve this collection of cross sections, many of which are in excess of 50 miles in length with one well per landgrid section. The initial technical question was, "Is it possible to scan in color individual 30-40 feet long paper cross sections, including more than 21,000 wells, and be able to quickly access and view them over the Internet?" To our knowledge no one had ever attempted a scanning project of this magnitude.

The project involved numerous trials and errors. An initial experimental scan OF 50 wells at 300 DPI was saved as a TIFF. It was huge (2.5 gigabites)! Totally unacceptable! With further experimentation TIFs at 125 DPI converted to PDFs were found to yield quality color "as good as the original". Another problem began to occur when scanning paper cross sections that were taped. Tape-generated "glueballs" resulted in unwanted multi-colored horizontal lines spanning across the cross sections. The problem was remedied by the Oklahoma Geological Survey (and BLM) by sheathing the cross sections between two sheets of mylar during scanning.

The subsurface geology of Eastern Oklahoma is now just a click away thanks to the efforts of J. Glenn Cole and those who have worked to preserve his life-long work. The cross sections are now available from Energy Libraries Online (ELO) on their website at http://energylibrariesonline.com . Using their interactive maps PDFs of individual cross sections can be selectively accessed with just a few mouse clicks.