



## Board Member Editorial

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Local operators founded our organization in 1957 due to concerns that the Kansas Legislature and other industry organizations did not consider unique Eastern Kansas operating issues in creating new laws and policy. Kansas at that time, had major national oil companies very active throughout the state. Calling the red cement trucks meant calling Halliburton, not Hurricane!

Recently I have spent some time in our state's western ranges, and I can attest that we need EKOGA's advocacy as much now, as we did then. The day-to-day issues we face operating shallow oil and gas wells remain unique to our small business operators.

Throughout the state, we all have the same goal – produce as much oil and gas as we can as economically profitable as we can. Nevertheless, our fellow operators to the west work in a different environment and have a different standard operating procedure. Whereas the bulk of the activity in Eastern Kansas is secondary recovery development in mature areas, out west they are constantly looking for new discoveries. Wildcatters first discovered oil near Russell in 1923, since then, over 7,000 fields have been discovered. Just in the past four months of published data, the Kansas Geological Survey has named 24 new oil and gas fields, all in the western ranges.

Operators, speculators, and landmen start by leasing large swaths of acreage in potentially productive areas; months of legwork and thousands of dollars are spent before even considering moving a rig in. Today, a well is rarely drilled before evaluating the location with a seismic survey; operators will shoot a large block of acreage, square miles at a time, looking for subsurface traps, a potential subsurface pot of gold – black gold.

Geologically, our shallow Cherokee sand waterfloods are quite different from the stacked carbonate zones identified by the seismic data. Our shallowest wells might be no more than a couple hundred foot deep, and our “deep” wells in Butler and Cowley county are 2,500 – 3,000 ft deep, but out west they target zones 3 – 4 – 5,000+ ft deep. Rigs drill day and night and consequently support operations: cement crews, water trucks, and dozers run 24/7 too. Rigs evaluate drilling shows with drill stem tests (“DST”), oftentimes running several tests per well – a lot of tripping, but the rigs rarely core. Finally, operators run open hole logs to correlate the shows and confirm their DST results. In Eastern Kansas, DSTs and open hole logs are pretty rare. Given the pressures, temperatures, lost circulation, and lithology deeper wells encounter, certain precautions are taken at every step of the completion process – drilling, cementing, stimulation, and production – we'd be wise to adopt some of these best practices into our own standard operating procedure where economically feasible.

Operators often have teams of geologists, engineers, and production superintendents to assist with operations and well evaluation. In my testimony to the Kansas Legislature earlier this year, I emphasized that often times, our members are performing the tasks of multiple professionals themselves – we must wear many different hats to support our operations.

As we know, our operations depend on secondary recovery, water floods, to maximize our recoverable oil. Though there are a number of successful secondary recovery operations out west, generally operators rely on primary production, hence the search for new reserves and a large number of dry holes. Given our reliance on secondary recovery, the difficult headwinds we have recently faced in getting injection wells permits approved due to a misinformed public, it is safe to assume that this issue disproportionately affects us. I recently played golf with a Wichita operator who was unaware of the difficulty we have been facing with injection well protests; he said he could not remember the last time his company permitted an injection or disposal well. It is not that our counterparts are not permitting injection and disposal wells, but that they do so far less frequently and not all key personnel may be affected when issues arise.

Finally, the economics of our operations differ significantly. The cost of our shallow slimhole wells pale in comparison to the deeper wells to our west, and we drill a lot fewer dry holes. Consequently, the deep wells must produce more oil to justify the risk of drilling deeper depths – bet big, win big (or lose big). Nevertheless, as a testament to the wildcatter spirit and resiliency of Kansas oilmen, operators are still finding lots of oil in new locations – from 2012 to 2014, Rawlins County saw their annual oil production increase by over 1.25M bbls from just 68 new producing wells. These annual production increases exceed the annual oil production of every Eastern Kansas county, except Butler. Unfortunately for us, it is difficult to imagine a new discovery increasing one our county's production by 8X over two years.

Kansas has economic oil and gas production at depths over a vertical mile apart. Production at every depth presents a unique set of operating challenges, but everyone can learn from their counterparts to solve certain problems or create a better SOP. Eastern Kansas operators are fortunate to have EKOGA to advocate our unique operational issues to our representatives in Topeka and our regulatory agency in Wichita. We must remain diligent voicing our concerns so that we are heard when policy decisions are made, otherwise, we will be subjugated to the concerns of those with operations completely different from our own.