Is Now The Time
For ‘Closeology’ To Give Way
To Technology?

I have noticed a trend lately among oil field folks I talk with about using technology on the job. It appears technology still plays a significant part in our industry, however, there are those who have yet to overcome the “closeology” or “cookie cutter” approach to well development. In other words, some still apply surrounding well data to other wells in the area, and sometimes even to wells not in the area.

We all know there never have been two wells that were just alike, and that what an operator sees on one well can be completely different just a few hundred feet away. However, people continue to take this approach because it appears to work. The well is drilled, completed and put on line, and we get production. The question is how well it works.

A few years back, I defined closeology as (1) “the act of using a technology in the field to recover hydrocarbons simply because one’s competitors are using a similar technology with perceived success and cost savings;” or (2) “the act of duplicating a process that worked in one formation for multiple additional formations in multiple areas because it worked in the original formation.”

This phenomenon, of course, is nothing new to the oil field. For many years, folks have taken what has worked for them nearby—or even what has worked for a neighbor—and applied it to their wells. This approach can work in today’s uncertain market, in which many operators are just beginning to drill again, and are being very selective about what they choose to drill and how much they spend.

But it makes sense that they would want to produce every bit of hydrocarbon out of every well they drill. For me, this is where technology and training come into play. We all know there is no shortage of emerging technology designed and developed to optimize wells and increase production. We also understand that there are multiple opportunities to train and learn from industry peers, although cost often becomes a factor for operators who, in some cases, are moving forward just to keep their doors open.

A friend who has been in the industry for his entire career pointed out to me, “The problem with training and technology is that when things are booming, we feel like we don’t have time to train; we just want to keep things moving. Then when things are slow, we have the time, but don’t want to spend the money.”

From what I have seen lately, this appears to be true. This is especially unsettling when one looks at the number of wells that may need special treatment, refractoring, enhanced oil recovery, etc., in the coming years. According to data from the U.S. Energy Information Administration, more than 50 percent of the lower-48 states are sitting on top of unconventional opportunities. Many of these areas have wells that have been shut in and will need to be revisited and produced in the future.

It is unclear at present what will work for these wells and what types of technology will be needed to produce these areas efficiently and economically. As we begin this process, using technology and training will be critical.

So, what are we to do? For me, it begins with fundamentals. There is no substitute for having a solid foundation and an appreciation for fundamental technology. Always keep in mind the essential elements of geology, reservoir characterization, drilling, completions, and production. From there, begin considering new technology.

Organizations such as the Research Partnership to Secure Energy for America, the Petroleum Technology Transfer Council, the Society of Petroleum Engineers, and the American Association of Petroleum Geologists are all credible sources of emerging technology, and offer training with a mission of supporting the oil and gas industry.

Additionally, in part because of market conditions, many highly experienced professionals have retired and now are available and actively teaching courses, often for these very groups. Individuals with 30+ years of experience are sharing their experience eagerly at workshops, trainings and conferences near you. This is the time to take advantage of the experience and technology that is at our finger tips.

Experience and knowing what works does matter, especially when paired with useful technology rooted in good data supported by training. The oil field has a rich history of doing what one’s neighbor is doing. But it also has a rich history of using experience and technology to innovate and move forward. I encourage everyone to carry on that tradition by exploring new ways to optimize every well every time.

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