

Dave Cannon | Diamondback Energy

So where do we go from here?



Biography:

Dave has 11 years of total industry experience working multiple unconventional plays throughout the US L48. After obtaining his MS in Geoscience from Penn State University, with a focus on structural geology and geomechanics, he moved to Midland, TX and worked Rockies unconventional assets with ConocoPhillips. His breadth of experience included plays in Wyoming, Utah, North Dakota, and Montana. Then Dave moved to Tulsa with Samson Resources and eventually Newfield Exploration working Rockies and Mid-Continent unconventional plays, such as the Shannon/Sussex, Niobrara, ETX “Eaglebine”, Buda/Georgetown/Glen Rose, Meramec (STACK), and Woodford (SCOOP). In early 2014, Dave moved back to the Basin with Diamondback Energy, where he is dedicated exclusively to Permian Basin unconventional exploration, assessment, and development.

Abstract:

Over the last decade, the Permian Basin E&P industry has stood witness to one of the fastest production growth trends due in part from the advent of horizontal drilling and hydraulic fracturing. Over this time, our industry has continued to investigate, innovate, and exploit the vast resources that this region has to offer. This continuing work has ushered the Permian Basin into a position of global relevance. As humans continue to see upward socioeconomic movement in many parts of the world, the need for inexpensive energy will always create a demand for hydrocarbons. Economic perturbations can cause short-term demand fluctuations, but since the advent of hydrocarbon use, there has always been a steady increase in demand. It is this demand that we, in this industry, have an obligation to fulfill in a way that provides economic stability, not just in our community but across the world.

However, I believe we have reached a point in our Permian exploitation that can jeopardize continued growth and our standing as a global leader in technology innovation and hydrocarbon production. In 1962, E.M. Rogers developed an elegant theory called the Diffusion of Innovation (DOI). Simply put, this theory helped to explain how, over time, an idea or product gains momentum and diffuses through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption does not happen simultaneously in a social system, rather it is a process by which some people are more apt to adopt the innovation than others. The stepwise adoption can be fit into a distribution curve, representing different stages of innovation adoption. The five adoption categories; Innovators, Early Adopters, Early Majority, Late Majority, and Laggards represent this progression. Additionally, the point between Early Adopters and Early Majority is known as “The Chasm” which represents a critical point where an innovation is determined to have “social proof” to continue progress with adoption.

I postulate that our industry currently resides in the boundary between the Late Majority and Laggards. I believe this to be as dangerous of a place as “The Chasm” for continued innovation and continued adoption of new E&P technologies. This is a spot where complacency and status quo can halt progress and prevent innovation adoption from reaching 100% utilization. The perfect case for such a failure in diffusion is the coal industry. That industry almost reached full utilization, but complacency stopped further innovation to prevent future pressures on the industry. This quickly ushered a chance for another fuel, natural gas, to jump “The Chasm” and gain social proof and begin to replace coal. We as an industry must always continue to fight complacency where it is found and continue to push towards 100% adoption. I believe this to be an economic driven, but also morally driven. To continue to provide an inexpensive source of energy to a growing world, we must do what we can to innovate and find new ways to produce more so we, as humans, can continue to enjoy ever rising standard of living.