Points to the Technology Paper

- Callon has recently assembled a world-class interdisciplinary team of geoscientists and subsurface engineers to investigate complex shale reservoirs, implementing high resolution images of the subsurface in three-dimensional (3D) space, which will ultimately be used for production enhancement and longer term field development strategies. New and innovative subsurface technology integrates advanced subsurface models and multiple data types for a detailed and complex 3D picture of the subsurface that provides a measurement of shale quality.

- Callon's subsurface team successfully achieves this implementing a cutting-edge 3D seismic driven technology that's ahead of the unconventional sector and its peers. The new technology quantitatively measures mechanical shale properties in high resolution 3D space, resulting in complex hydraulic fracture modeling for a more engineered and efficient treatment design that is data driven, contrary to current trial-and-error operating methods. The subsurface team recently published a high profile technical paper describing the novel technology and subsequent workflow, linked here:.

- Callon's team is using the 3D images and subsequent geomechanical maps to optimize well spacing while mitigating potential well-to-well interference (or frac-hits) at subsurface areas that are more conducive to such phenomena, thus prioritizing acreage, and scheduling and designing treatments before wells are drilled for increased cost efficiency and enhanced production, contrary to less efficient trial-and-error methods. Likewise, zipper (stage) sequencing, when simultaneously hydraulic fracture stimulating mega well pads, can now be designed months ahead of the drill bit, effectively taking into account shale quality and variability along horizontal wellbores which ultimately effects fracture complexity and stimulation efficiency.

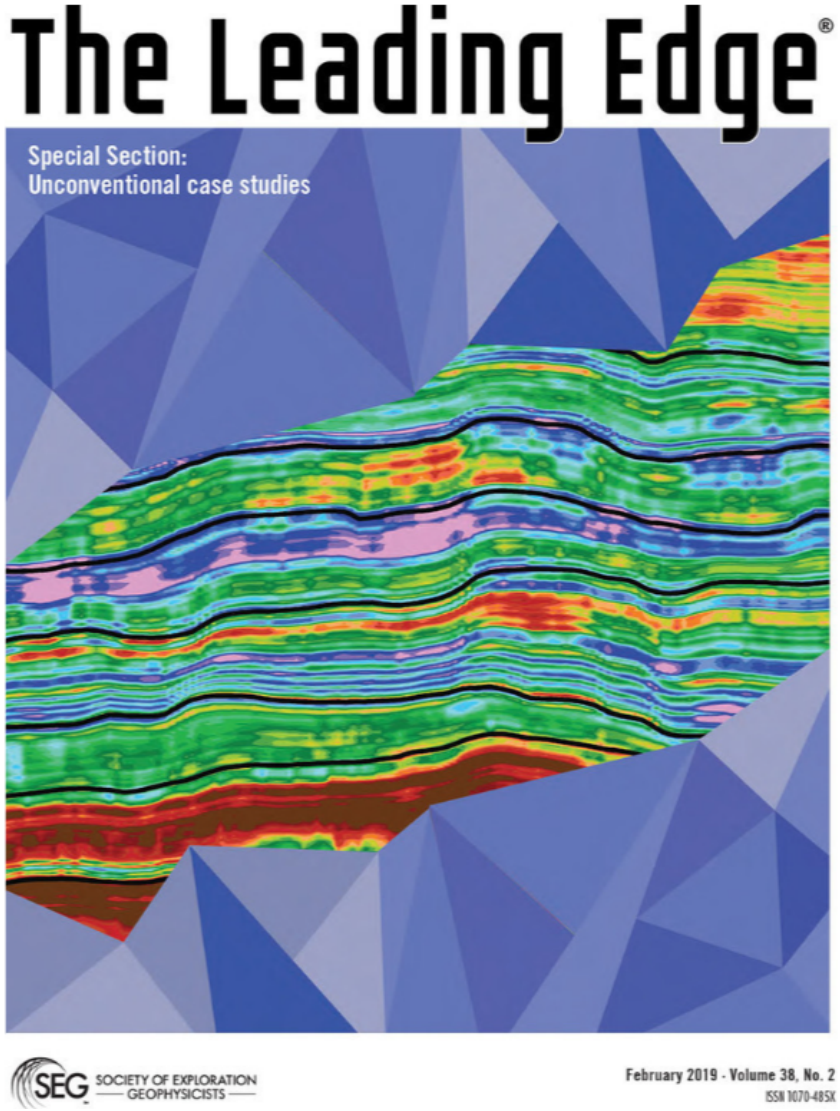
- *Not a bullet point, but a comment:* Points mentioned above reflect what's been said in the paper that are also antidotal to the general consensus of current concern echoed at the Hydraulic Fracture Technology Conference (HFTC) at the Woodlands a couple of weeks ago, that defining the subsurface accurately is becoming more of a critical issue. Here's the article: https://www.spe.org/en/jpt/jpt-article-detail/?art=5089

Below are a couple of quotes from the article:

"Later in the discussion, Elliot echoed the sentiment: "You're going to find a lot of really good information in the subsurface if you start measuring."

Also stated in the article: "The first thing we need to realize is that rock fabric in these shales plays an amazing, important role," said King as he introduced a separate list of rock qualities that can define the different types of frac hits. They include mechanical properties, bedding planes, variances in the different formation layers, and how it all fits into time-dependent deformation through production—parameters that are present in all active shale reservoirs, just never in the exact same way.

Cover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2D cross section example of a “high resolution image”

- 600 dpi meta file used for the cover