Session 2: Reservoir Simulation and Physics of Flow
Frac Hits Reveal Well Spacing May Be Too Tight, Completion Volumes Too Large

Trent Jacobs, JPT Digital Editor | 01 November 2017

Source: Getty Images.
Unconventional operators and service companies have produced new research that suggests in many cases horizontal wells are being drilled too close together, which may have a lasting negative impact on the recovery rates of shale fields across North America.
Unconventionals are multiscale and multiphysics

- simulation challenges abound
  - physics at different length scales are important
  - macroscale and microscale physics are prescribed by different governing equations
  - computing power is vast, but finite, thereby limiting direct numerical simulation
  - hence, we result to upscaling of physics and geological features
Session 2 Agenda

• Pore-scale simulation of transport in shale: Hamdi Tchelepi, Stanford

• A discrete-fracture-matrix modeling and upscaling framework for improving well performance in unconventional reservoirs: Robin Hui, Chevron

• Discussion