



Increasing Production with Better Well Placement in Unconventional Shale Reservoirs, Challenges and Solutions

The idea that the stimulation process “will take care of the geology” in unconventional reservoirs is proving false.

Unconventional reservoirs are often regarded as resource plays with little demand for reservoir analysis beyond simple geosteering techniques during the development campaign.

This leads to the common practice of stimulating wells with equally spaced stages and treating all the stages exactly the same, with no regard to the nature of the rock being treated.

Clearly the stimulation process alone cannot mitigate the impact of geology in unconventional reservoirs; however, mechanisms do exist for improving results in them. Given a map of geo mechanical properties along the wellbore, completion engineers can optimize the position of plugs or packers, and stimulation engineers can fine-tune the design of the treatment applied to the rock. By re-establishing the link between production and geology, these methods can decrease the exploitation costs of unconventional reservoirs.

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Pitcher holds a BS in geology from the University of Derby and an MS in mineral exploration from Imperial College London. He has coauthored more than 25 papers and articles on logging while drilling tools, petrophysics, geosteering, and unconventional reservoirs. He was a Distinguished Lecturer during the 2012–2013 lecture season.