

Characterization of Shale Gas Reservoirs for Engineers

Xingru Wu

University of Oklahoma

Abstract

There is no doubt that reservoir characterizations in different scales are critical in reservoir development and production optimization. Even through current technology and equipment reveal more and more details of core samples and enable geoscientists to understand the structure and elements of these samples, engineers from reservoir and production disciplines are still using traditional tools in reservoir simulation and well performance evaluation. For example, curvefitting technologies in rate forecast, which was originated in 1940s or earlier, are still being used in shale gas production forecast. This gap could be bridged via communication through different disciplines and calls for continuous research.

This presentation highlights on the importance of pore size distribution in shale gas reservoirs and their impacts on quantifying resource and production and some recent progresses in shale gas reservoir rate forecasting technologies. Furthermore, how to close the gap so that the data from scientists could be used by engineers will be proposed through topics that needs joint research of the industry and academia.