conferenceseries.com

3rd International Conference and Expo on

OIL AND GAS

July 13-14, 2017 Berlin, Germany

Research on well type and well pattern optimization for tight gas recovery enhancement

Dewei Meng, Ailin Jia, Guang Ji, Lihua Cheng, Zhi Guo and Guoting Wang Research Institute of Petroleum Exploration and Development, China

Tight gas, the first large-scale used unconventional natural gas has been extremely important in Chinese energy domain. According to statistics in 2015, proven geological reserve of tight gas accounts for more than 30% in that of nature gas. Meanwhile its production accounts for 25% of nature gas output. Under such circumstances, tight gas development mainly faces three kinds of challenges: Firstly, newly built gas fields are needed for supplementation during field production decreasing; secondly, gas production ratio is largely affected by constant fluctuations of gas price and gradually decreased quality of newly developed reserves; thirdly, tight gas recovery needs to be enhanced dramatically since the general recovery factor is quite low, just around 35%. Therefore, how to guarantee stable development and enhance recovery factor of tight gas in a long run are the main problems during tight gas reservoir development. In this study, Sulige gas field, the largest natural gas field in China, is taken for an example, mainly from well pattern optimization. Six specific aspects are taken in to account and they are fine reservoir characterization, 3D geological modeling of complex reservoir and distribution characteristics of remaining gas, well pattern infilling in developing area, recovery factor enhancement by horizontal wells and mixed well pattern. The results and methods are used for long-term and stable development in tight gas field.

Biography

Dewei Meng began his professional career at Research Institute of Petroleum Exploration and Development (RIPED) in 2008, having abundant experience in unconventional gas development for nearly 10 years. He is mainly engaged in development and evaluation of low permeability and tight gas reservoir and has made great contributions to improving reservoir engineering. He has published more than 10 papers in reputed journals.

mengdewei@petrochina.com.cn

Notes: