Title of article: Risk Evaluation for Production-Injection Recompletion and Sidetrack

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Abstract

Using a decision tree and stochastic parameters, expected monetary value is calculated to evaluate optimal sidetrack time. In view of placing a high confidence level on analytical approach to optimal sidetrack time for a waterflooded reservoir based on possible uncertainty of economic and reservoir parameters and probability of sidetrack success, a major assumption on a parameter in a previous study is re-evaluated. Material balance and displacement efficiency are used to re-evaluate this critical waterflood performance parameter. The change in the relative influence of the stochastic parameters to optimal sidetrack time due to re-evaluation calls for much attention with probable need to further reduce assumptions made, however insignificant the parameter may be. This change will affect the degree of acceptability of the analytical approach. The probability of success of sidetrack sums up the geological and technical uncertainties, deconvolution of these will give the analytical approach an edge.