

Title of article: Risk Assessment of Optimal Sidetrack Time

Author(s): Orodu, O. D., Ako, C. T. and Craig, A. J.

Outlet: Petroleum Science & Technology (Taylor & Francis), 31(16): 1585-1594.

Date: 2013

Abstract

Optimal time of sidetrack is evaluated considering the uncertainties of reservoir variables as it affects production performance and economics based on the uncertainty associated with the sidetrack operation. Analytical production performance schemes are applied to study scenarios of production under natural decline and water-flood recovery using Monte Carlo simulation. Caution should be exercised on assumptions made to simplify the objective function, as it may not truly represent subsurface flow. Full evaluation of sensitivity of time to reservoir variables is possible using a proxy-model based on experimental design due to the complex physical phenomenon of subsurface flow.