NETool® Software

OVERVIEW

NETool® software is an industry-leading simulator for designing and modeling advanced completions. It provides a more powerful way to understand your wells via high-resolution models of your wellbore inflow, leveraging upscaled reservoir grids. It is especially powerful for wells with inflow control devices (ICDs), inflow control valves (ICVs), multilaterals, long reservoir contacts, multiple zones, or thin pay intervals.

NETool software helps you to be better informed when adjusting ICDs/ICVs or changing completion configurations through understanding the real-time flow complexity. Models can be calibrated with real-time data, effectively creating a well digital twin (a digital representation of your wells).

Figure 1: NETool® software provides a more powerful way to understand your wells via high-resolution models of your wellbore inflow, leveraging upscaled reservoir grids.

KEY BENEFITS

» Achieve highly accurate completion modeling for wells with long laterals, multiple zones, and thin pay intervals
» Help better manage advanced completion operations by understanding wellbore flow dynamics in real time
» Run simulations in seconds, allowing design updates while drilling

KEY FEATURES

» Steady-state numerical simulator that models inflow, using upscaled reservoir grid and logs
» Display simulation results overlaid with completion schematics along the well
» Automatic model calibrations with real-time sensor readings

BENEFITS

Design Advanced Completions
Design completions with more accurate, high-resolution wellbore inflow models. Easily overlay plots from different runs and test equipment from an extensive library of over 1,000 items. Generate wellhead performance curves without intersection of inflow performance curve (IPR)/vertical lift performance (VLP). Run simulations in a matter of seconds, allowing design revisions during drilling.

Manage Advanced Completions
Optimize surface and downhole equipment configurations based on the most updated state of wellbore flow dynamics. Help improve the wellbore hydraulics model with multiple sensor readings.
Integrate Wellbore and Reservoir
Have the same well model for both production and reservoir engineers. Easily export advanced well design into reservoir simulators with a few mouse clicks. Help reservoir engineers define advanced well models in reservoir simulators to more accurately simulate well drainage patterns.

More Accurate Inflow Modeling
Simulate inflow more accurately by calculating the Productivity Index (PI) for every segment. Honor local heterogeneities, skin factors, relative permeability, PVT effects, and condensate banking. Automatically calibrate the model to well tests. Simultaneously use bottomhole pressure, tubing head pressure, and/or flow rate as simulation targets.

Detailed Wellbore Hydraulics
Model tubing and up to four annuli at once. Incorporate electric submersible pumps (ESPs) and optimize their configurations. Assess the production impact of new completion tools, artificial lift types, or other equipment inside almost any well. Match completion models with tubing rates or fluid downhole rates obtained from production logging tools (PLTs) to keep the reservoir properties up to date.

Hydraulic Fracture Modeling
NETool software is equipped with fracture modeling for unconventional or tight reservoirs. It uses a built-in 2D transient reservoir simulator to rapidly model the production of oil, gas, condensate, and water to estimate the decline rate.

Mature Well Recompletions
Validate the feasibility of mature well recompletion design by predicting whether the fluid will permeate through the gap between the inner string and the original completion. Rapidly simulate production from different recompletion scenarios to help determine the most effective strategy to revive the production of mature wells.

Uncertainty Analysis
Improve modeling accuracy by taking into account uncertainties in reservoir pressure, permeability, rock anisotropy, and skin by using stochastic analysis methods.

SYSTEM AND SOFTWARE

Operating Systems
» Microsoft® Windows® 7 or later 64 bit
» Red Hat® Enterprise Linux® 7 or later 64 bit
» 300Mb disk space required