

SwellSim® Software

OPTIMIZE SWELL TECHNOLOGY PRODUCTS FOR ENGINEERED AND RELIABLE SOLUTIONS

OVERVIEW

The SwellSim® software program is a Halliburton proprietary Swellpacker® system performance simulator used to select the most suitable packer design to overcome the challenges of each wellbore. SwellSim software helps Halliburton representatives provide engineered, customized packer design recommendations to customers based on their specific requirements and well conditions. This helps ensure delivery of the industry's most reliable swellable packer solutions. Because the simulator is based on actual test data, it provides the utmost confidence the selected product will meet customer expectations.

The SwellSim software program was developed through extensive testing on the expansion properties of the Halliburton swellable elastomers and delay systems. Using the customer's well conditions and requirements helps the software program predict the downhole performance of each customized Swellpacker® system design. This provides the user the ability to observe the impact of well conditions on a variety of designs (bonded-to-pipe, slipon, cable bypass, etc.) and polymer types (oil, water, and hybrid-swelling) in the proposed well environment. Packer design collaboration often occurs in real time as Halliburton representatives illustrate changes in variables using the SwellSim software until the packer is optimized to meet the challenges of the application.

BENEFITS

- » Provides engineered packer performance recommendations
- » Predicts time to first seal
- » Illustrates time to operational and maximum differential pressure
- » Shows the effect of hole size variation
- » Provides run-in-hole time
- » Enables suggestion of delay systems
- » Helps identify potential failure modes
- » Reduces downhole risks
- » Decreases nonproductive time (NPT)

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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SWELLSIM® SOFTWARE OUTPUT

The simulator automatically generates a differential pressure profile and a swell profile (time to seal and time to fully set vs. hole size) curve. The following examples show the curves extracted from the simulator.

