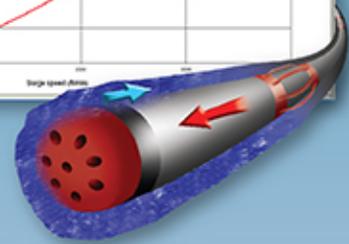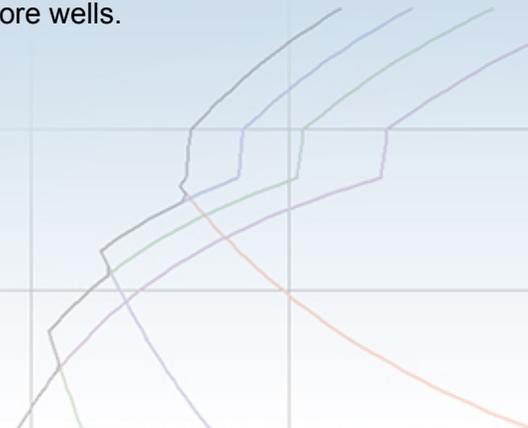# SurgeMOD
Surge Pressure Prediction

Moving a pipe in a well is accompanied by a mud displacement in the hole. This leads to pressure variations. The accurate prediction of surge and swab pressures is very important in wells where the pressure must be maintained within narrow limits to ensure trouble-free drilling and completion operations.

SurgeMOD is a complete surge and swab hydraulics model for drilling and completion. It analyzes the complex downhole hydraulics when running casing or making a trip for various pipe ending conditions and circulation sub tools.

SurgeMOD not only predicts the surge and swab pressures for a given running speed, but also calculates optimal trip speeds at different depths and the maximum allowable circulation rate after the casing or liner is set. The result is a higher percentage of successful casing/liner runs and tripping operations; particularly in ERD, slim holes and deep offshore wells.
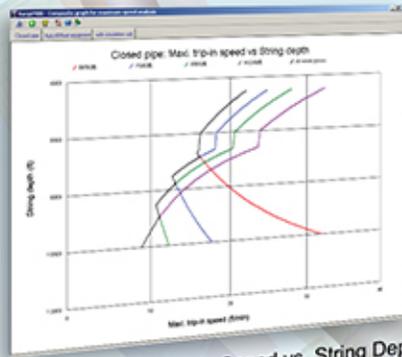
SurgeMOD – Surge Pressure Prediction
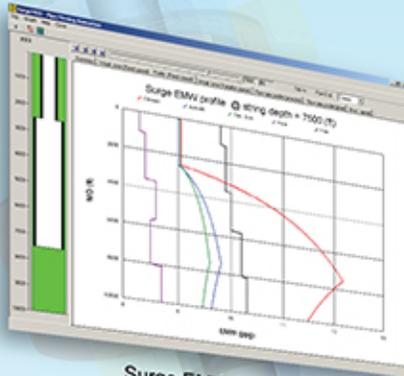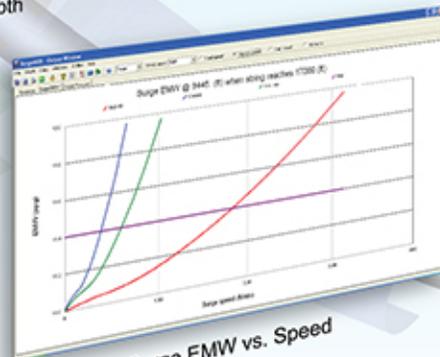

Surge EMW Profile

Maxi. Trip-in Speed vs. String Depth for All Weak Zones

Close Pipe: Maxi. Trip-in Speed vs. String Depth

Surge EMW vs. Speed

Features

- Pipe end: closed/open/auto-fill/bit/circulation sub
- Fixed tripping speed analysis
- Sensitivity analysis on tripping speed
- Maximum tripping speed
- Multiple weak zones
- Pump while tripping
- Pressure drop cross float shoe
- Bingham plastic and power law models
- Allowable flow rate analysis after the casing is set
- Tripping visualization
- Microsoft Word® report
- US oil field, SI and customized units
- Multi-language: English, Spanish and Chinese

System Requirements

- Microsoft Windows® 10
- Microsoft Windows® 8/8.1
- Microsoft Windows® 7
- Microsoft Office® 2010 or later
- Pentium or AMD processor, 1 GHz or faster
- 2 GB RAM (4 GB recommended)
- 200 MB of free disk space for installation
- 1,280 x 768 display resolution with true color
- Install from download link or CD