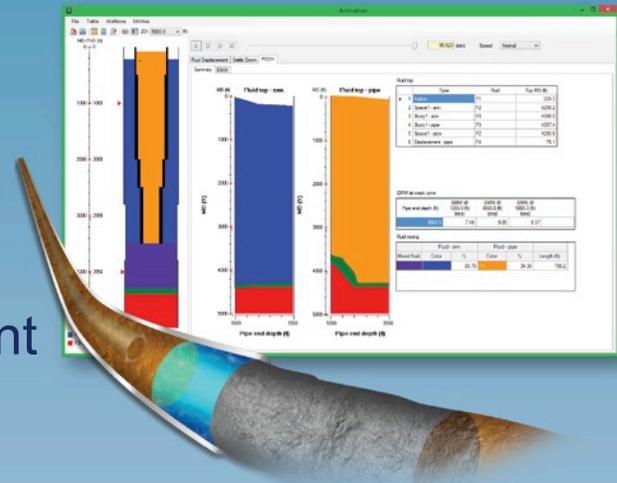# PlugPRO
Cement Plug Displacement

Setting a cement plug on the target zone either creates a solid seal to stop fluid movement or provides a kick-off point for sidetrack drilling operations. The process involves pumping cement slurry down the work string into the targeted zone, removing the work string from the cement column and allowing the cement slurry to harden in the wellbore. The volume of spacers pumped ahead and behind cement and the volume of displacement is critical to the quality of the cement plug. The traditional method is to pump all the fluids until each fluid level is equal to that inside the string. The limitation to this method is that the fluid could be contaminated once the string is pulled out of the hole due to variable fluid densities as well as wellbore and work string sizes.

Pegasus Vertex, Inc. has developed PlugPRO, software that models the displacement hydraulics of fluids and simulates fluids contamination during pipe pull out of hole. PlugPRO aids in optimizing the pumping schedule to minimize contamination within the cement slurry and spacer once the work string is pulled out of hole, ultimately, enhancing wellbore integrity.
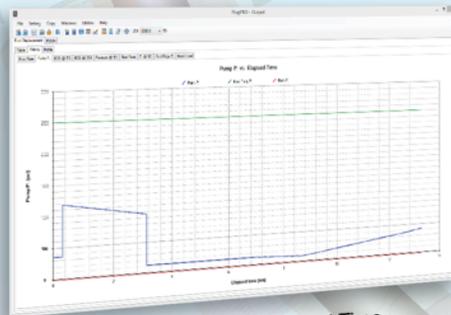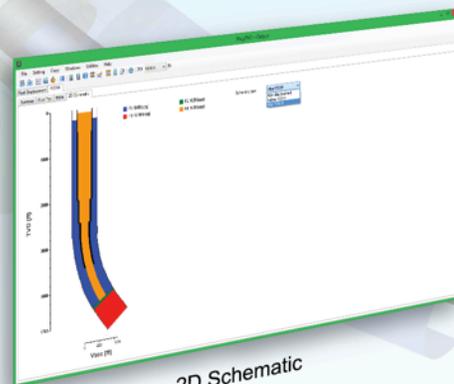
PlugPRO – Cement Plug Placement

POOH Animation
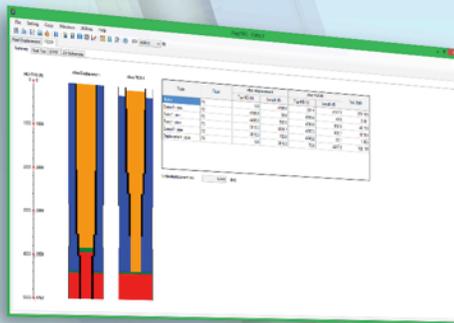
POOH Summary

Pump Pressure vs. Elapsed Time

2D Schematic

Features

- Optimize fluid volume to balance slurry and spacer levels
- Underdisplacement volume calculation
- Customized pumping schedule
- Fluid contamination after pulling pipe out of the hole (POOH)
- ECDs and pressure
- Circulating temperature
- Displacement and POOH animation
- Hook load during displacement
- Microsoft Word® report

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