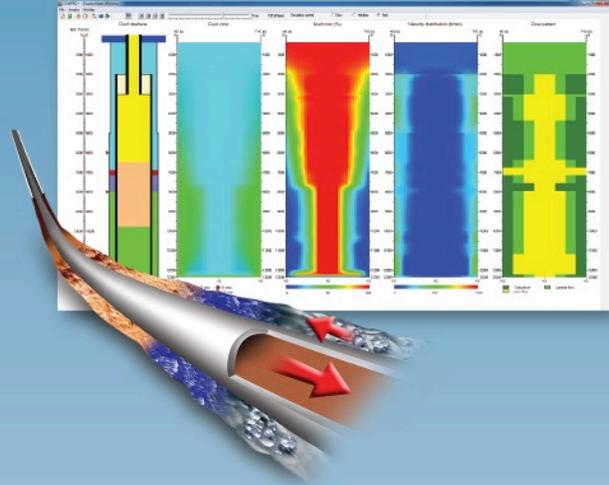


# CEMPRO<sup>+</sup>

## Mud Displacement

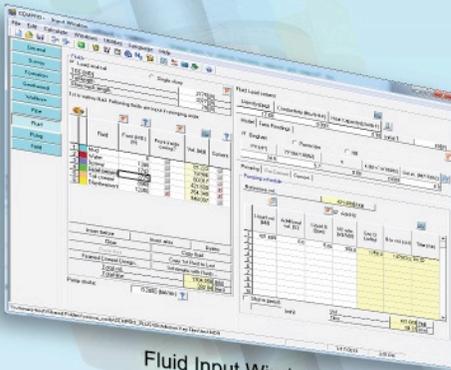


The ultimate yet most difficult goal of cementing operations is to provide zonal isolation by displacing drilling mud with cement slurries. Incomplete mud removal creates a poor cement seal and non-productive time (NPT). To ensure critical zonal isolation with mud removal optimization, PVI has developed CEMPRO<sup>+</sup>, an enhanced version of PVI's mud displacement model, CEMPRO. The key enhancement of CEMPRO<sup>+</sup> is the capability of displacement efficiency modeling.

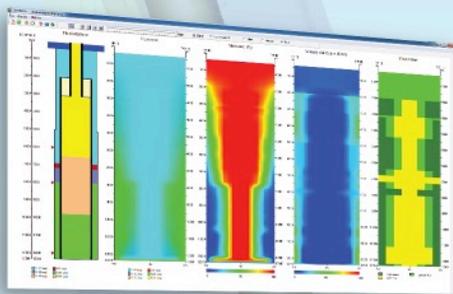
Designed for land, offshore, conventional and/or foamed operations, CEMPRO<sup>+</sup> uses advanced numerical methods to solve momentum and continuity equations on 3D grids and calculates the fluid concentration as well as displacement efficiency. It accounts for many factors that can affect the efficiency of a displacement job including fluid properties, pumping rates, casing standoff and complex wellbore geometry.



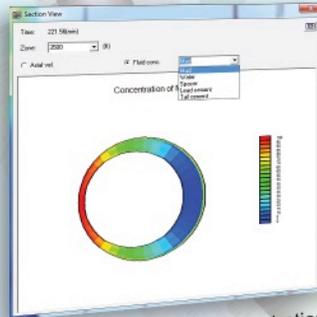
Video



Fluid Input Window



Displacement Simulation



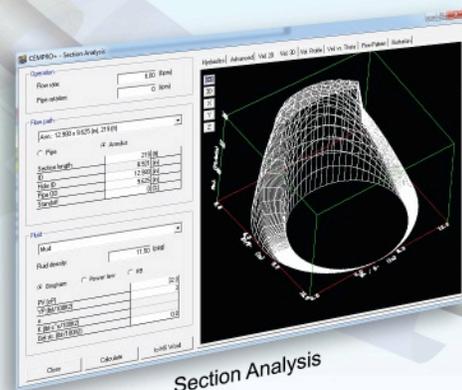
Section View of Fluid Concentration

## Features

- Displacement efficiency
- 2D map of fluid concentration
- Survey import from text or PDF® file
- U-tube simulation
- Offshore – fluid returns to sea floor
- Forward or reverse circulation
- ECD and pressure
- P/T dependent density and rheology
- 12 fluids, each with up to 40 stages
- Circulating temperature
- Foamed cementing
- Displacement animation
- Hook load
- Job evaluation
- Gas flow potential
- Circulation sub
- Eccentric annuli
- Displacement fluid compressibility
- Multi-language: English, Spanish, Chinese and Russian

## 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



Section Analysis