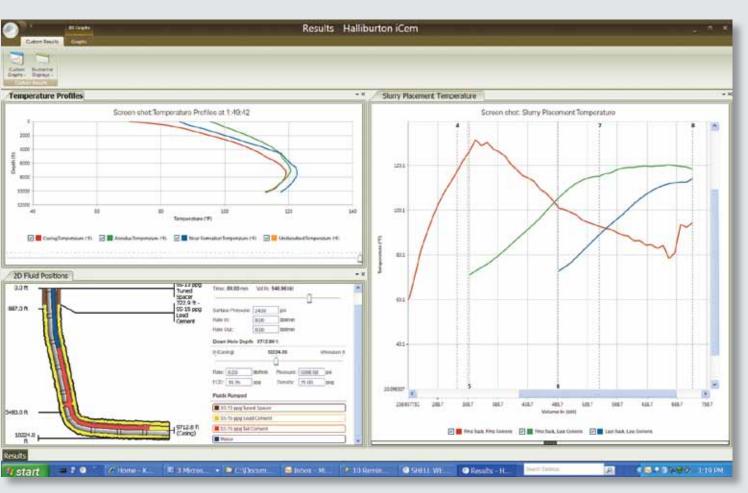
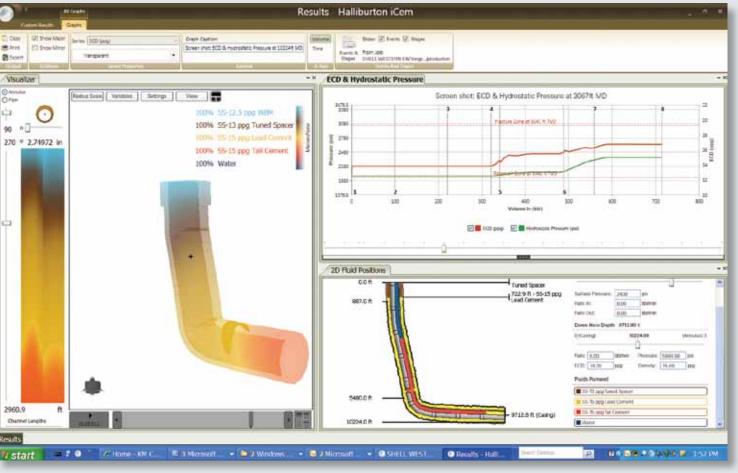
## The Most Robust Cementing Design Tool in the Industry Dramatically Increases the Probability of Wellbore Integrity

## **Evaluate Critical Variables Before the Job**

iCem® Service is a software simulator based service to help operators optimize the cement operation regardless of the well type or asset. This scientifically-grounded analytical tool is operated by Halliburton-certified technical professionals globally. iCem service evaluates the effect of changes to variables including mud displacement, slurry properties, casing/pipe movement & centralization, fluid volumes, pump rates, and temperature / pressure differentials. Sheath integrity can be assessed at any point in the life of the well. Simulations that took days to develop and execute are now reduced to hours.



Temperature Profile Plot / Slurry Placement Temperature Plot

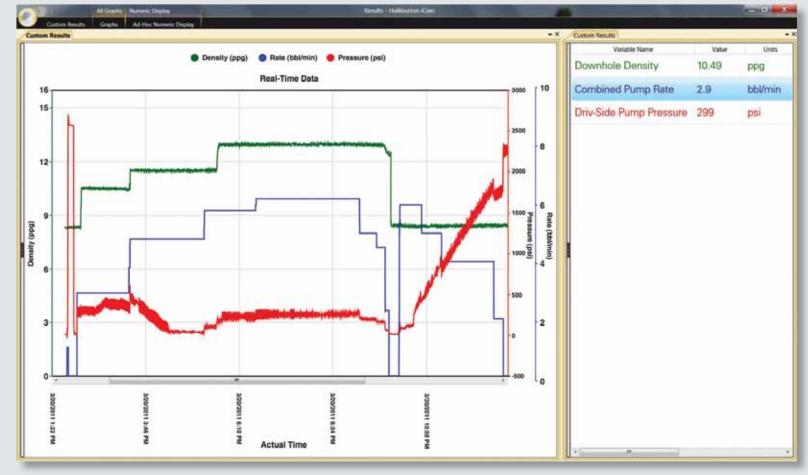


Interactive 3D Displacement visualizer / 2D Fluid Position

Comprehensive models can be run iteratively

Cross Section

| 100% 9# W884 - 0201 | 100% Fresh Water | 100% 15.69 Tad - 0201 | 100% | 100% | 15.69 Tad - 0201 | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 10



Real-time data acquisition and monitoring

- Helps optimize designs for primary cementing, a reverse-circulation job, a balanced plug job, or a post-cementing job evaluation
- Prognostic models simulate fluid-flow interaction, displacement phenomena, and stresses in set cement
- Appraises the cumulative effect of stress to the cement sheath from events such as pressure and well testing, injection and stimulation treatments and production cycling.
- Different results can be compared simultaneously for vigorous design evaluation