

OptiCem RT™ Cement Job Design and Simulation System

Now, See What's Happening While You Can Still Do Something About It.

This advanced software program simulates the job while it is actually going on, letting you adjust the displacement rate as needed and telling you how fast you can safely pump. Because that information can be transmitted to another location and monitored there, OptiCem RT cuts down on the need to travel to remote locations. One person can handle several jobs in different parts of the world—all from one central control center.

OptiCem RT also lets you:

- See where your fluids are downhole
- See ECD in real time, enabling you to pump as fast as safely possible
- Compare what was planned versus what is actually occurring, allowing any necessary corrections to become obvious in time to respond

How It Works

At the well site during cementing, OptiCem RT gathers data from the slurry (as well as from nitrogen and chemical units, for foam cement jobs). It then formats this data for analysis by the OptiCem RT module. This module reruns the cement job simulation using the actual well data. The results give the on-site specialist downhole information that is invaluable when last minute decisions must be made.

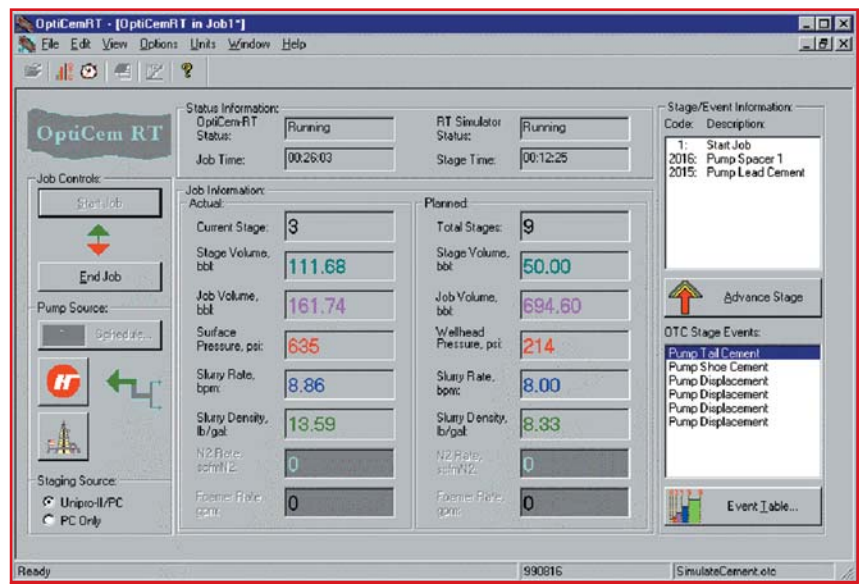
OptiCem RT Succeeds Where Others Fail

Recently, Halliburton Energy Services planned a foam job in western Oklahoma. The job design required constant density. As a result the N₂ rate would need to be ramped, therefore, a good foam plan meant the inclusion of redundant systems.

During the foam job, the primary system went down and Halliburton's OptiCem RT system was called upon to continuously recalculate the

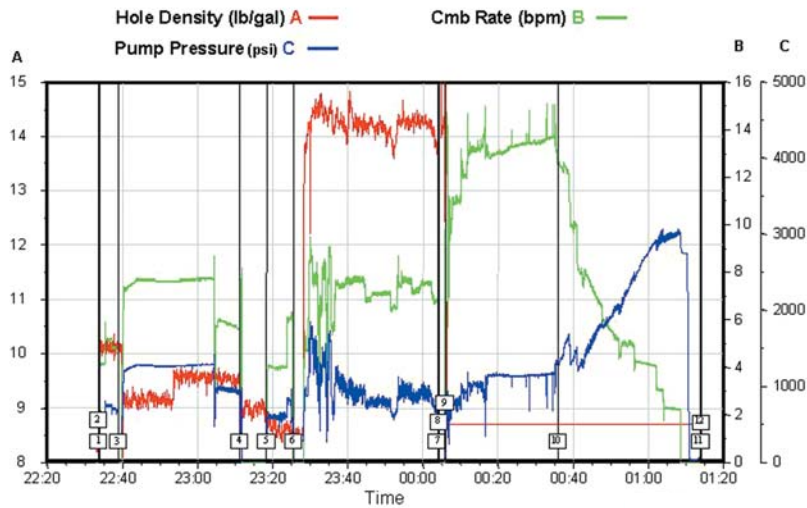
required N₂ rate. OptiCem RT based its real time calculations on the planned N₂ schedule, the real time pump rate, and the stage volume already pumped when the automated system went down.

The client was extremely pleased with the results. OptiCem RT allowed the entire job to be pumped as planned under difficult conditions.



In addition to the above comparisons of planned vs. actual, OptiCem RT allows you to view graphically any desired combination of planned job parameters, predicted results, measured sensor data, and real-time calculations based on the actual sensor data. Summary data is also available that tracks the minimum, maximum, and average values, per stage for both measured and calculated parameters such as pressure, rate, density, ECD, and nitrogen.

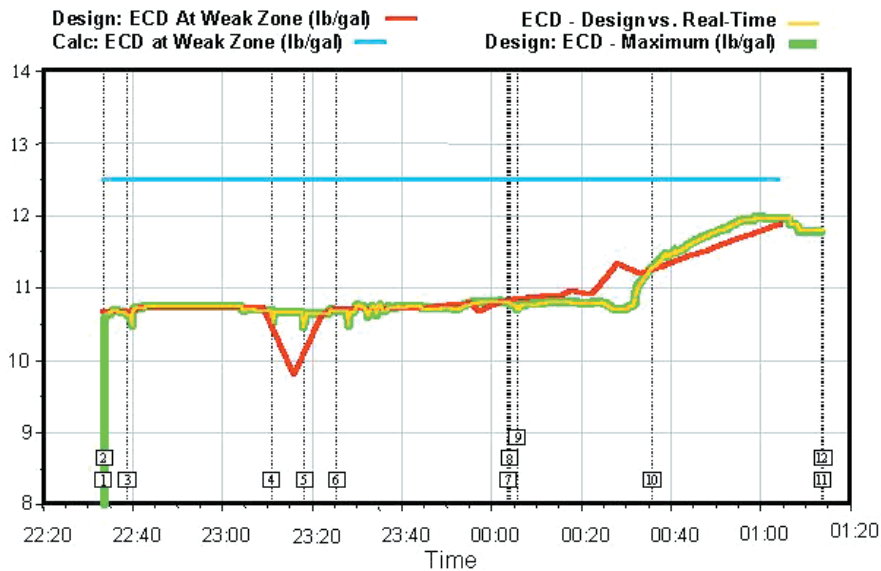
7 5/8" Production Casing



HAL5735

Immediately upon completion of the job, a Halliburton field representative will be able to present you with a color summary of your complete job.

ECD — Design vs. Real-Time



HAL5736

In addition to your typical pressure, rate and density summary, because you can see equivalent circulating density (ECD) in real time, OptiCem RT allows you to pump as fast as safely possible.

For more information on how OptiCem RT can improve your next cement job by making it safer and more effective, contact your local Halliburton representative—your Solution ConnectionSM.

www.halliburton.com

H02637 10/05
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Fluid Systems