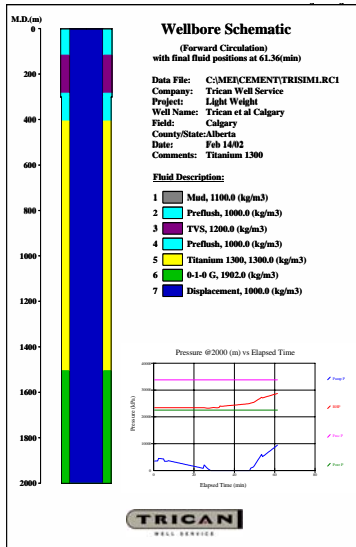


CEMENT SOFTWARE

Cement Simulation Software:

Trican runs cement simulators that model predicted pressures and flow regimes at various points in a well. The simulator models foamed and conventional cement.



Pre-Job Planning – Design Simulators:

Trican utilizes two different types of cement simulators for pre-job planning. One is for conventional cementing and the second is for foamed cementing - both are designed by third-party software companies. The software closely simulates the events of a primary cementing job and, in particular, it can calculate the following:

- anticipated surface pump pressure
- pressure at bottom and/or zone of interest
- fluid free fall
- fluid flow rate in/out
- fluid flow regimes (plug/laminar/ turbulent)
- equivalent circulating densities
- casing burst/collapse pressure

The simulator includes a sophisticated animation feature which shows the cementing job from preflush to displacement. The simulator works so well, in fact, that on a recent deep intermediate cement job the actual recorded surface pump pressures seen on the job were almost identical to those predicted by the simulation.

Cement Pulsation Modelling:

Trican has developed proprietary software for modeling cement pulsation designs. This software calculates the depth that pulses travel in the annulus, the magnitude and interval of pulses required to successfully prevent gas migration and the bottom pressure during the cement setting process.

Extensive Database:

Trican tracks well problems in an extensive database which enables our technical staff to predict potential gas migration or lost circulation problems before they occur.