DATA SHEET

HALLIBURTON

Cementing software

LOGIX™ AUTOMATION AND REMOTE OPERATIONS

# LOGIX™ Intelligent Cementing platform

Real-time monitoring, operational insights, and instant barrier validation

## FEATURES

- Streams real-time surface and downhole data during cementing operations
- Displays fluid movement, pressure matching, and downhole ECD in a unified dashboard
- Provides remote access to real-time and historical cementing data
- Tracks TOC in real-time with continuous visualization
- Monitors liquid additive system (LAS) injection rates and volumes in real time
- Tracks live pumping schedules and issues alerts for deviations

## BENEFITS

- Supports real-time, data-driven decision-making
- Confirms annular barrier integrity during execution
- Reduces delays associated with post-job TOC analysis
- Improves operational continuity and minimizes remediation risk
- Supports long-term optimization through historical job data comparison

## Overview

Cementing plays a pivotal role in well construction with direct impacts on long-term well integrity, zonal isolation, and overall production performance. Traditional post job evaluation tools delay top of cement (TOC) confirmation and annular barrier coverage, which increases uncertainty and introduces potential remediation costs. LOGIX™ Intelligent Cementing platform replaces delayed interpretation with immediate barrier validation and real-time operational insight. Operators verify annular barrier coverage and TOC targets during the job, transforming a delayed process into immediate, actionable insights.

## Real-time data visualization provides immediate barrier validation

A digital hydraulic twin simulates downhole conditions using real-time inputs from Halliburton surface pumping equipment to assess pressure response and fluid placement. LOGIX Intelligent Cementing platform uses this data to provide immediate insights into TOC and annular coverage, which helps ensure well integrity and meet regulatory compliance. Real-time visibility into limits such as fracture gradient, pore pressure, and pump capacity helps provide a proactive approach to safer, more efficient cement operations.

## Cloud-based data accessibility

Centralized, cloud-based storage gives customers real-time access to live cement data and historical job records from any location. Teams can identify trends, optimize practices, and help ensure continuous improvement. This streamlined capability strengthens operational continuity, supports performance benchmarks, and verifies cement placement with immediate validation.


## Available modules

### CEMLive Lite

Provides live surface data, which includes pumping pressure, pump rate, slurry density, and pumped volume. This lite configuration is ideal for remote teams or lower-risk well operations where downhole variables are not required.

### CEMLive Pro

Extends Lite capabilities by streaming calculated downhole variables from a hydraulic digital twin. Real-time surface and downhole parameters such as calculated pumping pressure and bottomhole ECD allow dynamic pressure matching between actual and simulated conditions. This confirms model validity and supports accurate TOC tracking and key operational milestones.

### ECD Pro

Monitors real-time downhole ECD and compares values against the designed ECD, fracture gradient, and pore pressure limits. This supports proactive decisions to help prevent formation damage. ECD Pro is essential for high-pressure, high-temperature (HPHT) wells and formations with narrow pressure margins.

### TOC Pro

Delivers continuous, real-time fluid placement visualization within the wellbore and dynamic TOC updates throughout the cement operation. The module confirms isolation of critical formations during the operation and provides instant TOC placement verification, that can eliminate post-job analysis or logging runs.

## Future modules

### Liquid additive system (LAS)

Monitors additive injection rates and volumes in real time during slurry mixing, ideal for offshore and on-the-fly dosing environments. The module helps ensure accurate additive formulation by confirming target concentrations throughout the job. This helps prevent cement slurry inconsistencies and supports long-term wellbore integrity.

### iLOG

Simulates expected cement bond log (CBL) responses in near real time by combining dynamic fluid placement tracking, downhole pressure simulations, and cement system properties. Integrated with a hydraulic digital twin, it generates live visualizations that mirror standard log outputs for immediate insight into zonal isolation. These features help operators anticipate bonding issues before waiting on cement, adjust fluid volumes, flow rates, or displacement sequences to optimize bonding and make informed decisions about logging requirements based on predicted coverage.

Historical comparisons with actual CBL results from offset wells validate the model's accuracy over time. Once validated, operators can reduce or eliminate CBL runs on wells in a field, pad, or campaign. This saves time, cost, and wireline exposure while maintaining isolation integrity. This supports data-driven well construction, instant validation, and efficient compliance workflows.

### KPIs Pro

Tracks key performance indicators such as minimum, maximum, and average values for pressure, rate, density, ECD, and compliance percentages relative to design tolerances (e.g., slurry density within ±0.2 ppg). This supports real-time quality control, improved operational discipline, and campaign-wide performance benchmarking.


### LOGIX™ unit vitality real-time data API

Provides secure, real-time access to cementing job data through open API integration. Customers can integrate live and historical datasets, such as pressure, rate, ECD, TOC estimates, and additive volumes, into proprietary systems, third-party visualization tools, or corporate databases.

Designed for digital-first operators, the module supports unified dashboards, automated reporting, and long-term data retention. This helps improve data ownership, transparency, and long-term knowledge retention for operators.

### Barrier Advisor™ model

Generates pre-job predictions and post-job execution scores with offset well data, job performance metrics, best practices, and pattern recognition techniques. Machine learning models and nearest-neighbor analytics compare current job conditions with historical cases from a global database or the operator's field, basin, or portfolio to optimize design decisions.

**For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com**