

## CIRCA Pro simulation software for complex coiled tubing applications

Optimize job designs for advanced analysis and operations

## CIRCA™ Pro simulation software

for complex coiled tubing applications provides tubing force analysis and modeling for wellbore hydraulics, solids transport, and optimal well cleaning. It features modeling capabilities that help ensure success in coiled tubing intervention operations where solids are present in the wellbore.

An effective wellbore cleanout is dependent on many factors, including particle size, bottomhole pressure, fluid density and viscosity, pump rates, run and pull rates, deviation, and so on. CIRCA Pro software provides fieldproven modeling that accounts for these parameters and more, delivering the industry's most accurate predictions for advanced cleanouts. CIRCA Pro software optimizes time on location by providing accurate job design, simulation, tool setup, and safe operating quidelines. It also models jetting functions for optimal flow management downhole.

The abrasive perforating module analyzes perforation geometries while considering tool configuration, pump time and rates, slurry concentration, and well configuration. The resulting model provides pressures, rates, and

other guiding parameters that will generate optimal tool pressure drop for effective perforations.

CIRCA Pro software helps coiled tubing operators determine H2S partial pressure conditions downhole. It also determines whether H2S inhibitor is required—and at what volumes—for given coiled tubing materials and well conditions.

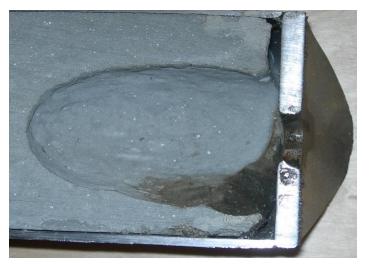
CIRCA Pro software is constantly updated based on feedback from the field. Just like the CIRCA Complete package, it is developed by Baker Hughes, a leading coiled tubing service provider for use by other coiled tubing experts. It is the software that Baker Hughes field personnel and engineering rely on to deliver complex coiled tubing interventions.

## **Applications**

- Coiled tubing well intervention and drilling
- Tubing force analysis and wellbore hydraulics modeling
- · Advanced cleanout operations
- · H2S analysis
- Abrasive perforating

## **Benefits**

- · Advanced job modeling
  - Delivers industry leading solids transport analysis
- Provides advanced application modules in addition to those available in CIRCA Complete software
- Helps service providers work up to the edges of the operating envelope in challenging coiled tubing operations
- Flow and tubing force analysis
  - Enables safe, efficient, predictable operations
- Specialized application modules
  - Includes all standard modules included in CIRCA Complete software
  - Offers switchable jetting tool analysis



CIRCA Pro delivers accurate abrasive perforating models, built on years of testing and real-world data.

