

Drilling Software | Sophisticated Yet Simple



LCPRO

Lost Circulation Model

Overview

During drilling or cementing operations, drilling fluids or cement slurries can be lost into permeable or cavernous formations. This is called lost circulation. Treatment of lost circulation has become an important aspect of well construction. Pumping in lost circulation treatment material (LCM) while controlling bottom hole pressure and temperature requires a complete understanding of the hydraulic and thermal conditions in the wellbore.

Pegasus Vertex developed LCPRO to help design drilling, cementing, or well-treatment operations where lost circulation is present. The simulator models the fluid displacement process with a planned pumping schedule, different loss conditions, and annular filling operations.

Benefits

Cost Efficiency

- Effective prevention and treatment of lost circulation can significantly reduce operational costs associated with lost fluids, equipment damage, and downtime.

Risk Mitigation

- By simulating various scenarios and loss conditions, LCPRO allows users to identify potential risks and develop mitigation strategies.

Comprehensive Analysis

- Provides a complete overview of well conditions, allowing for better risk assessment and management strategies throughout the drilling or cementing process.

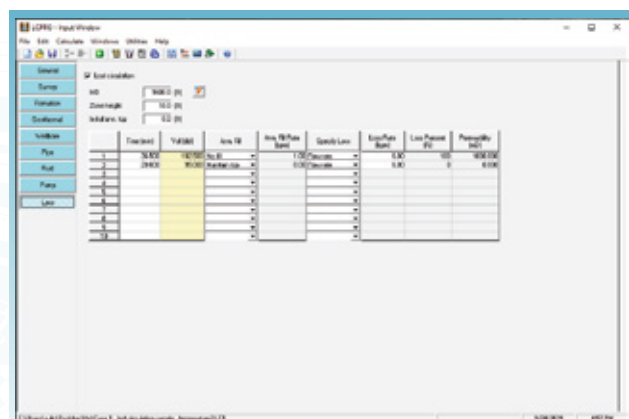




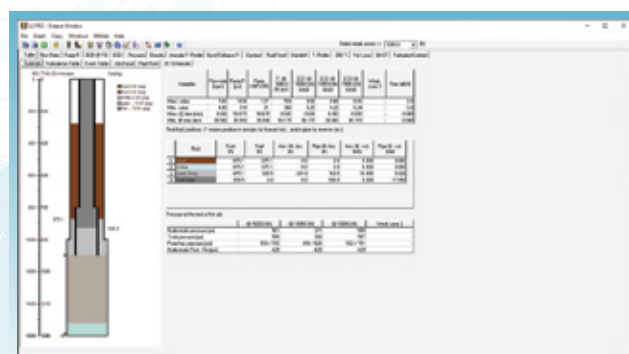
LCPRO—Lost Circulation Model

Features

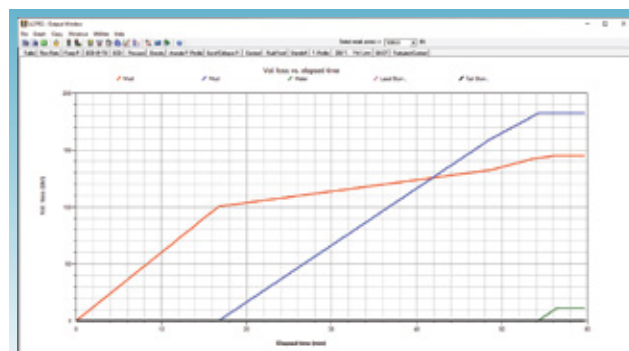
- Land and offshore well
- Options to specify or calculate loss rate
- Multiple annulus filling situations
- Lost volume vs. time
- Free-fall/back-fill (U-tubing) calculation
- ECDs/pressures at various depths vs. time
- Handling of up to 12 fluids, each at up to 40 different rates
- Fluid displacement animation
- Shut-in time
- Caliper log import
- Bingham Plastic, Power Law, and Herschel Bulkley rheology models
- Temperature at point of interest
- Pressure drop calculation for coiled tubing
- Microsoft Word® report



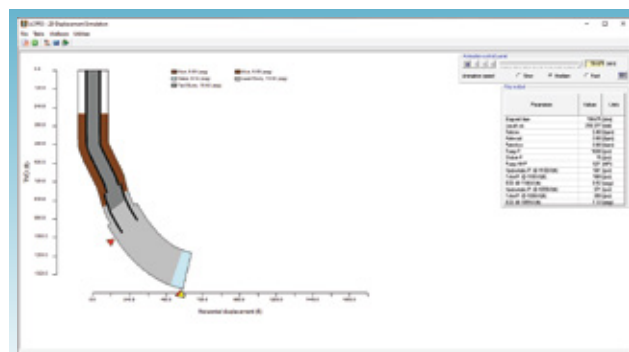
Loss Rate at Different Formation Conditions



Handles up to 12 Fluids



Volume Loss vs. Elapsed Time



2D Displacement Simulation

System Requirements

- Microsoft Windows® 10 or above
- Microsoft Office® 2016 or above
- Dual-core processor, 1.4 GHz or higher (Not compatible with ARM processor)
- 4 GB RAM
- 200 MB of free disk space for installation
- 1,280 x 768 display resolution