# CTEMP®
Circulation Temperature Model

Overview

As the search for petroleum resources becomes more extreme in terms of depth, pressure, and temperature (HPHT drilling), wellbore circulating temperature prediction becomes a very crucial process. It has implications for flow assurance (wax, hydrates, and viscosity), stress analysis, drilling tool temperature tolerance, completion fluid density, cementing, and other variables. Predicting circulating temperature in deepwater wells is further complicated by the presence of risers and choke/kill/boost lines.

Pegasus Vertex, Inc. is leading the way with CTEMP, a software that predicts wellbore circulating temperature for drilling/circulating operations. CTEMP addresses the transient heat transfer between wellbore and seawater/rock formation. Its interactive on-screen graphic results provide operation guidelines for expensive HPHT drilling operations.

CTEMP®—Circulation Temperature Model
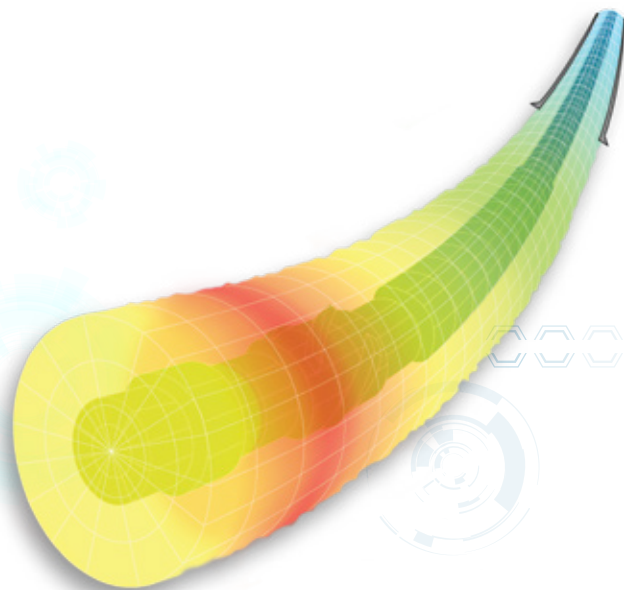
Features

- Transient heat transfer model
- Land and offshore wells
- 15 flow paths
- Directional well with survey data
- 10 formation layers
- Multiple cased, open holes and pipes
- Pumping schedule
- 5 cased holes, 10 open holes, 20 pipe sizes, and 3 inner strings
- Bingham Plastic, Power Law, and Herschel Buckley rheology models
- Temperature profiles
- Cooling effects of mud tank
- Influence of wind speed and sea current
- Wellbore schematic with color visualization
- Microsoft Word® report
- US oil field, SI, and customized units

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
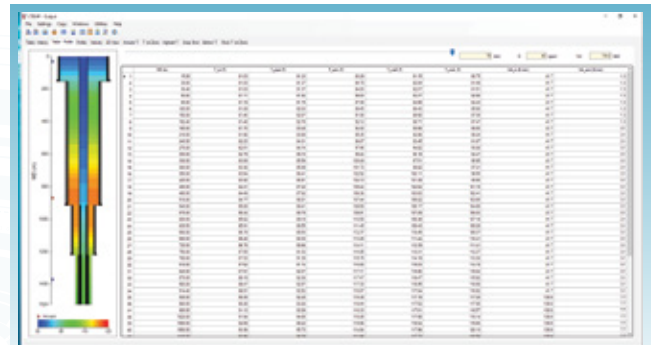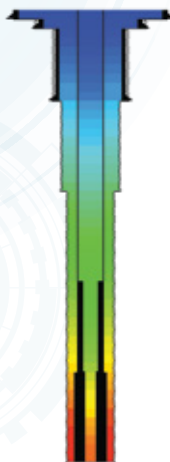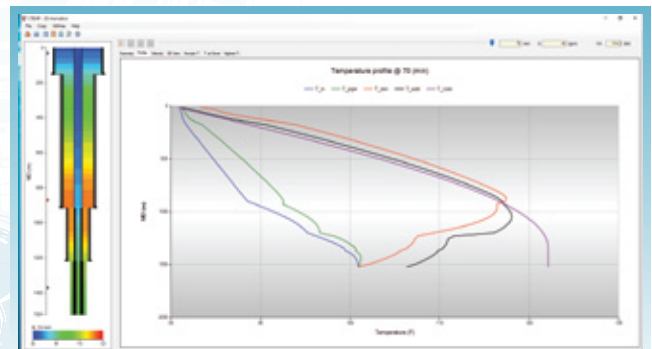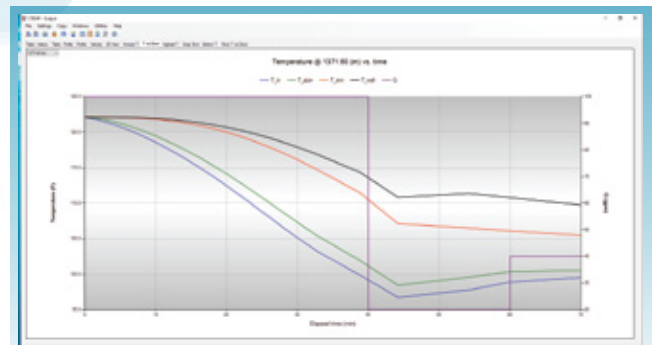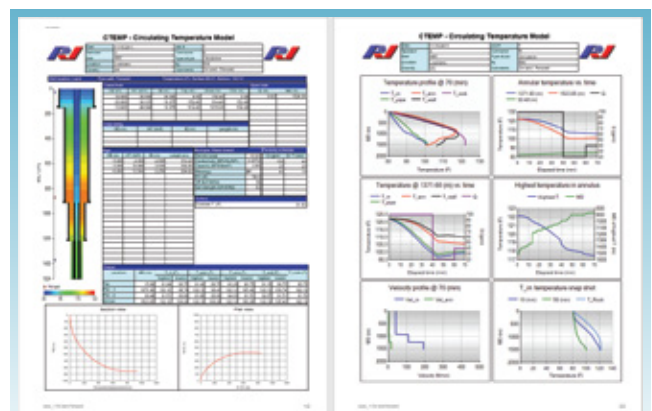- 1,280 x 768 display resolution

Table for Temperature Profile

Temperature Profile

Temperature vs. Time

Report