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Announcing Cerberus™ Version 9.0!

NOV CTES is proud to announce the new **Cerberus version 9.0** software release! NOV CTES remains committed to providing advanced software modeling for the coiled tubing industry, affording customers the ability to perform field operations in a safe and effective manner.

Cerberus version 9.0 includes over 100 customer-requested enhancements! Users will find the new functionalities very valuable when performing modeling on today's complex intervention operations.

In keeping with our ongoing commitment to quality, NOV CTES strives to incorporate customer-driven enhancements into every product.

A few of the **100+ Cerberus 9.0 enhancements** are listed here:

Cerberus Suite

- New launch screen that enables project organization
- Microsoft Vista™ compatibility improvements
- New Tool Editor includes:
 - Multi-section tools for more accurate tool definitions
 - Improved tool printing capability
 - Additional tool properties, including:
 - hydraulic diameter
 - temperature rating
 - pressure rating
 - normal force due to external arms or magnetic pull
 - jar firing forces
 - New tool schematics to represent tool properties without skewing image
 - Improved tool organization and search capabilities
- Improved viewing options for well survey
- Well survey can include generated wellbore tortuosity for improved modeling results
- Usability improvements to JP editor

Orpheus™

- Include collapse in String Design Wizard – CT only
- Improved fluid selection in String Design Wizard – CT only
- Differentiate the plastic versus elastic stretch for CT – CT only
- Support modeling of releasable cableheads – WL only
- Updated wireline tables – WL only
- Support modeling of crush-resistant wireline – WL only
- New maximum overpull at cablehead graph – WL only
- Torque Limit line on torque plots – JP only
- Sinusoidal buckling load curve added to measured depth plot – JP only

Orpheus, Cont'd.

- Track real force at any specific point in the jointed pipe – JP only
- Sensitivity analysis function added for jointed pipe – JP only
- Include column headers when copying data
- Improved input data printout
- Improved string movement algorithm to ensure all tool bending events are captured
- New pump down rate graph
- New sinker bar energy calculation
- Added additional sensitivity analysis calculations
- Added new features to report generator
- Increased tool section calculation limit from 70 to 300

Hydra™

- New Solids Cleanout module
- Job Design Wizard now stores values
- Calculate and display Equivalent Liquid Volume (ELV)
- Fluid viscosity in pipe added to detailed data grid and printout

CT Fatigue

- Usability improvements to the string-cutting function
- More flexibility in String Configuration Wizard
- Improvements to estimating remaining trips in String Manager
- Improved printing from Reel-Trak™
- Added fatigue model for QT-16Cr tubing

Note: CT = Coiled Tubing; WL = Wireline; JP = Jointed Pipe

Attention: Cerberus Users with Current Licenses

Licensed Cerberus users may download the current-version Cerberus software from the NOV CTES website.

➤To download Cerberus 9.0

1. Back up all Cerberus-related data
2. Uninstall earlier-version Cerberus software
3. Navigate to the NOV CTES software download center:
http://ctes.nov.com/Software/download/Active_Customers.asp
4. Select the appropriate company name to access the password-protected file

➤To obtain password information or to renew a license

- Contact NOV CTES for assistance:
+1 936 521 2200
CTESsales@nov.com

➤To obtain software key-code authorization

- Click the online **Internet** button
OR
- Email the authorization code to CTESkeys@nov.com