

Cerberus v15.0 Modeling Software



Designed to meet today's design and monitoring challenges

Since 1995, Cerberus™ has been the leading intervention modeling software for planning and performing coiled tubing, wireline, and jointed pipe operations. Cerberus models provide advanced calculations for fatigue life, tubing forces, and hydraulics providing operational confidence. Featuring cloud connectivity, the entire organization now has access to the complete picture of operations and assets in real-time, enabling immediate process improvements, reduction of NPT, and unlocking opportunities to gain efficiencies for improving the bottom line.

Utilize Cerberus for the following:

- Tubing, jointed pipe, and wireline forces analysis
- Fatigue life tracking
- String design and selection
- Wireline weak point selection analysis
- Real-time string management
- Bottom hole assembly (BHA) configuration
- Local and cloud* real-time forces monitoring
- Hydraulics modeling



Max Completions™ Integration

Live TFA Connection

Push Orpheus™ projects directly from Cerberus to Max Completions, allowing for data-driven decisions.

Real-Time Fatigue Connection

Share real-time concurrent string views between field operations and remote users to make pipe management and operational decisions (cuts, pulls, pump rates, etc.).

District Administration Functionality

Manage all connected company strings and projects with Cerberus. Designated district administrators can push projects, strings, and more to and from the unit's PC to remotely set up real-time jobs and verify post-job field results.

*Real-time monitoring through cloud connectivity is available through Max Completions.



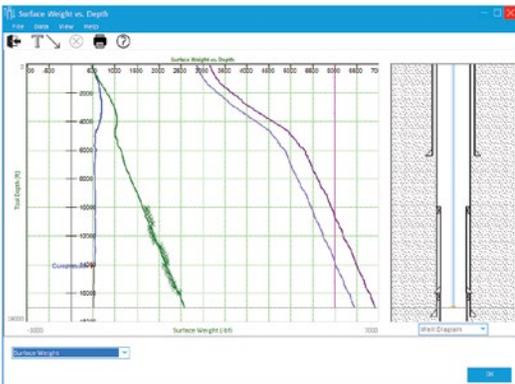


Orpheus

Coiled tubing, jointed pipe, wireline

Orpheus performs cumulative forces analysis to determine job feasibility and anticipate possible problems with extended reach tubing and wireline limits with fluid dynamics.

- Navigate highly deviated wellbores or other obstacles by modeling BHAs in real time
- Analyze the surface weights acquired during a job, identify apparent friction, and help predict the expected friction factor to be used in future projects
- Model tubing forces analysis (TFA) with multiple coefficients of friction (CoF) to create your broomsticks and determine when issues are arising in the wellbore



Wireline Weak Point Analysis

Wireline

Understanding your wireline and tools' parameters ensures a successful run. The wireline weak point analysis displays your project's simulated surface weight (RIH and POOH), allowing you to visualize the maximum overpull prior to activating the weak point or disconnect. It also allows you to visualize the maximum surface weight for the planned operation and check for potential cable tension to ensure you are working within the asset's limits.



Achilles and Hercules

Coiled tubing

Achilles™ fatigue calculations remain the industry benchmark for coiled tubing life monitoring. Today's complex applications make it critical to track the fat lly dangerous failure at the wellsite.

Hercules™ tubing limits plot is the widely accepted model that uses von Mises combined stress to predict tubing burst and collapse limits. The model considers helical buckling, maximum expected pressures, diameter growth, and torque.

String ID	String Name	Length (ft)	Weight (lb)	Stiffness (lb/ft)	Yield (ksi)	U-Tube (ksi)	Pressure (psi)	Flow (gpm)	Temperature (°F)	Notes
01	String 01	1000	1000	1000	1000	1000	1000	1000	1000	String 01
02	String 02	2000	2000	2000	2000	2000	2000	2000	2000	String 02
03	String 03	3000	3000	3000	3000	3000	3000	3000	3000	String 03
04	String 04	4000	4000	4000	4000	4000	4000	4000	4000	String 04
05	String 05	5000	5000	5000	5000	5000	5000	5000	5000	String 05
06	String 06	6000	6000	6000	6000	6000	6000	6000	6000	String 06
07	String 07	7000	7000	7000	7000	7000	7000	7000	7000	String 07
08	String 08	8000	8000	8000	8000	8000	8000	8000	8000	String 08
09	String 09	9000	9000	9000	9000	9000	9000	9000	9000	String 09
10	String 10	10000	10000	10000	10000	10000	10000	10000	10000	String 10

String Inventory Management

Coiled tubing

With this central location, you can now view, analyze, and access your strings in real-time. This includes maximum and average fatigue life, running footage, job counts, and more.