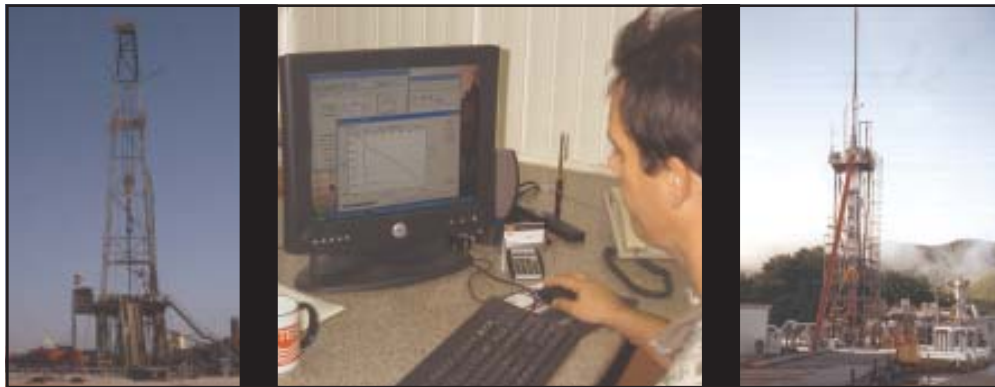




# *Cerberus*<sup>TM</sup>

## for Jointed Pipe



*Cerberus for Jointed Pipe* is state-of-the-art software used for modeling any operation involving the running of tools, casing, or completions into and out of wells. By analyzing the cumulative forces acting downhole at each stage of the job, *Cerberus* is able to determine whether the target depth can be reached, the desired tasks performed, and the equipment safely returned to surface. Its most important feature is the ability to model conditions in deviated and horizontal wellbores.

*Cerberus for Jointed Pipe* will help provide answers to many critical questions and may even prevent costly failures and downtime.

- *Can I reach the target depth without buckling the pipe and then return to the surface safely?*
- *How do the length, diameter and material properties of my BHA affect my ability to get past doglegs in my wellbore?*
- *How does varying drill collar length or diameter affect WOB and the location of the neutral point?*
- *What is the maximum WOB or set down force for each depth?*
- *For each depth, how much pull can be applied to the end of a toolstring before exceeding the yield strength of the pipe?*
- *Can I attain my desired WOB while drilling without helical or sinusoidal buckling taking place?*
- *How does the actual weight and torque at bit correspond to the surface readings on the rig floor?*
- *How much drag reduction can I expect to see from pipe rotation while running in or out of a deviated well?*
- *How does viscous drag from fluid circulation or reservoir flow affect the forces and stresses on the pipe?*
- *What is the risk of differential sticking?*

For continuous wellsite job monitoring and problem detection, *Cerberus* also runs in realtime.

## Features

- Full torque and drag model including tool joint effects
- User interface specifically designed for jointed pipe applications
- Customizable reports can be printed or saved in PDF format
- BHA bending calculations
- Both soft and stiff string capabilities
- Drilling fluid pressure and ECD calculations
- Cuttings transport and cuttings bed calculations
- Real-time torque and weight on bit
- Hydraulics module supporting single and multiphase fluids including foams and Herschel-Bulkley models

