



Society of Petroleum Engineers

Friday, 1 December 2006

DrillNET software suite promises efficiency, safety gains for drillers

Drilling engineers of all experience levels need to have relevant well data at their disposal in order to make informed decisions on well engineering and drilling operations. A new software suite promises to help engineers accomplish this by providing a user-friendly platform ideal for collaborative drilling and efficient training of new personnel.

Houston-based network technology company Petris recently unveiled the PetrisWINDS DrillNET software suite, which adds a network capability missing from other software offerings that will allow data to be shared, stored and reused among system users. The system also permits the use of multiple languages, including English, Russian, Spanish and Chinese, allowing engineers to work in their language of choice while generating reports in another.

The DrillNET suite combines the functionality from several Maurer drilling applications into one integrated system with a user interface that Petris calls both easy to use and intuitive. As with all Maurer software products, DrillNET does not require that data for an entire well be present to run calculations, and allows a user to focus on the specific drilling program of interest. This is one of the first applications of Maurer Technology software in the Petris product line since

Petris acquired the Maurer brand from Noble Corporation in June of this year.

The DrillNET design reportedly allows for faster and more efficient training of drilling personnel through its implementation of context-sensitive help and a "traffic light" mechanism that checks for missing variables. The software suite is based on the Microsoft.NET architecture, making it possible to generate output reports and export data into Microsoft Office products.

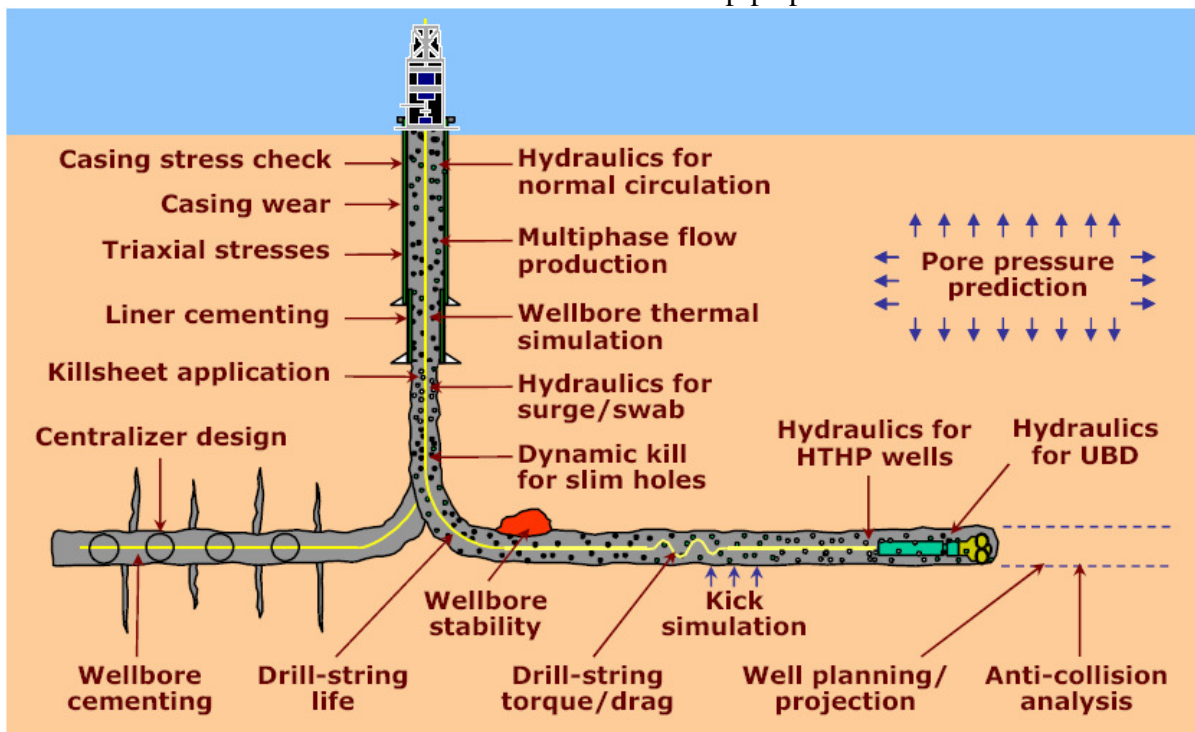
Petris also states that DrillNET increases operational safety, because its simple-to-use interface reduces training time, making it easier for new personnel to learn and use the program. In addition, the program allows a user to see all relevant data through the database, reportedly another safety benefit.

Petris states that the DrillNET software provides a great deal of flexibility to the drilling engineer in terms of its modular configuration and ability to interconnect with other applications. Ten modules are currently available in the DrillNET suite, but Petris states that more will be added in the coming months to bring the total number of modules to over 20. These will cover the range of most drilling and well construction activities, and drilling companies may select as few

or as many modules as needed for their applications.

The modules (both currently available and planned) include:

- **Two for wellbore stability** – These modules are designed to determine formation pore pressure for seismic stacking data and to analyze the mechanical and chemical stability of vertical or inclined wellbores
- **Two for well planning** - These generate 2D and 3D well paths and perform collision analyses between multiple well paths
- **Five for casing** – These modules assist the drilling engineer in tasks including analyzing multistage fluid placement in a wellbore, predicting wear in casing and risers, and calculating torque and axial loads on liner during cementing operations
- **Three for tubular mechanics** – These modules are designed to analyze torque and buckling of drill strings, predict fatigue damage of drill strings, and calculate the limits for burst/collapse pressure
- **Seven for wellbore hydraulics** – The modules evaluate fluid hydraulics for several well situations, including normal circulation, surge/swab pipe movements, underbalanced drilling, HT/HP wells, and multiphase flow production
- **Two for well control** – These modules are designed to describe multiphase flow that develops as a gas influx is circulated out of a well and to calculate kill information and prepare a drill-pipe pressure schedule.



PetrisWINDS DrilINET helps to solve a variety of problems common to well engineering and drilling operations.
Courtesy Petris

Petris has configured DrillNET with three framework versions tailored to a company's needs and based on the number of users and the collaborative features required. The **Basic** version is suitable for businesses with only one or two users, and provides a user with the ability to use the same data in multiple modules throughout the interface and store it in an individual database. The **WorkGroup** version is suited for companies with up to 10 users, and builds on the Basic version by allowing users to share data with each other and to access a collective database. Finally, the **Advanced** version is designed for larger companies and provides more scalability for a large number of users while also

providing the data capture, sharing and database support available from the WorkGroup version.

DrillNET was unveiled at the SPE Annual Conference in San Antonio, Texas in September. In a press release announcing the arrival of DrillNET, Jim Pritchett, President and CEO of Petris, said, "PetrisWINDS DrillNET represents a significant advance in usability for drilling engineering. Companies have told us that they need a solution that lets them collaborate and reuse drilling programs while making it possible to bring new personnel up to speed faster and with better performance. DrillNET is a direct response to these requests."

About Petris: *Founded in 1994, Houston-based Petris provides practical, user-friendly solutions for energy clients that leverage the company's expertise in data management, application hosting, geospatial information systems (GIS) and professional services. Using a patented, vendor-neutral technology breakthrough, Petris offers seamless data and other information integration services, to enable companies to tap their full information resources rapidly, in reaching E&P decisions. For more information visit www.petris.com.*