Success Story

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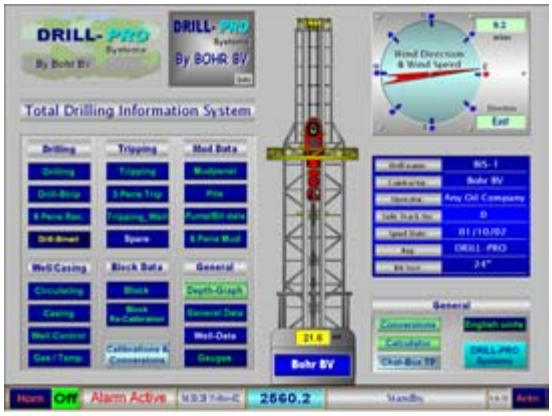
DRILL-PRO By Bohr BV Systems

Drilling Rig



DRILLPRO Systems Menu Display

Industry: Oil and Gas

Customers: Oil Companies worldwide

Bohr Instrument Services BV

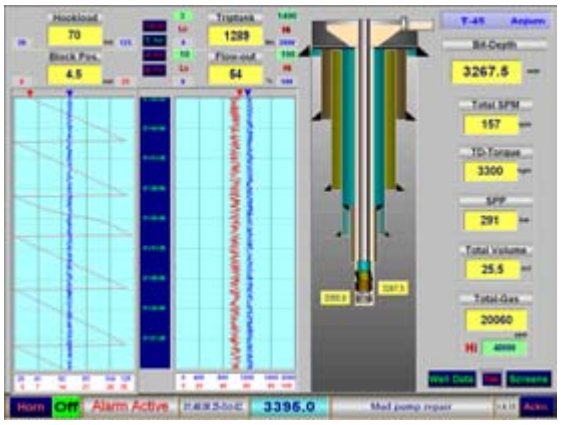
Oil and gas producing companies in the world explore on both land and sea to produce oil. Global Energy companies that explore for oil and gas, produce and refine oil and market their products throughout the world under their Corporate Brand Names, use Drill-Pro Systems by Bohr BV. On exploration sites worldwide, these Oil companies have installed a Bohr "DRILL-PRO" System with ICONICS Software to monitor and control all the operations of the DRILLING RIG.

ICONICS Software Deployed

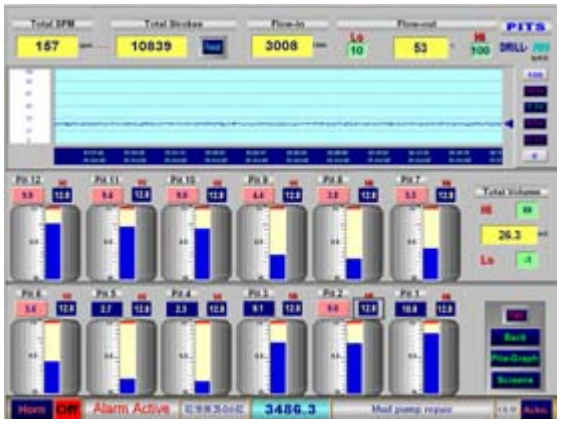
ICONICS GENESIS32 Software suite with GraphWorX32, TrendWorX32 and AlarmWorX32. This suite of software tools is installed on a Bohr, DRILL-PRO "Total Drilling Information System", which is an extensive data acquisition system for oil and gas rigs. This system must collect data in real time and monitors all the extreme forces on a drill bit while providing the drilling operator with a multiple of graphical data monitors which visualize all the collected data using the GENESIS32 Software tools.

Key Features

The DRILL-PRO package gathers data from digital and analog rig site sensors via a PLC data acquisition unit. Using a direct RS-232 serial connection between the DRILL-PRO System, interfaced to a Modbus server and Nyquist PLC. The operator PC collects data and is transmitted to two locations, the drill floor, where an operator views the graphic representation of the data on an 18" monitor, and to remote offices. This drill floor HMI monitor communicates with the data acquisition module (DAQ) to pass on information concerning screen types, scales, alarm limits and manual entries by the operator (depth, bit depth, pump efficiency etc.). The same real-time data is communicated wirelessly via an 802.11b network protocol to 3 separate computers in the engineering and project management offices. The many parameters that need to be logged and converted into other parameters demand a Software System that can process an unlimited amount of real time data from a variety of inputs is required utilizing a distributed I/O architecture saving cost and providing for flexible layout and better reliability overall.



DRILL-PRO: Trip / WellDisplay



DRILL-PRO: Tanklevel Display

DRILL-PRO:Virtual Gauge

Tip from the Customer

Extensive visualization of all the key parameters by the GENESIS Software System helps the drilling operator to prevent problems, drill more efficiently and reduce drilling time, which translates into overall cost savings.

Project Summary

The DRILL-PRO monitoring system required an easy to use, user selectable graphical and alphanumeric display software system. The ICONICS GENESIS32 Software suite met these requirements which included alarm monitoring of all the primary instrumentation. The installed system has the flexibility needed for customization and the modular structure of the software allows for easy configuration changes and upgrading. The Drill-Pro system accepts signals from a large number of sensors (rotary RPM, depth, pump pressure, temperature and tank levels). The values measured by these sensors are displayed in several graphical screens and used to calculate other important derived parameters like rate of penetration, weight on drill bit, hole volume, running time and pipe counts. This almost overwhelming amount of information is collected by the ICONICS Software System and presented in several clear graphical displays. The operator selects which screen to view using a touch screen and can then set parameters and alarm conditions as required.

Benefits of the System

The primary benefit that the ICONICS GENESIS32 System was the ability to do “Vertical Trending”. Data collected at the drill head and sent to the engineering and management offices computers are stored in triple redundancy in a Microsoft® Access™ database. This data is “Persistent Trended” and stored in RAM memory for immediate access, along with “Historical Trended” which is stored on their hard drives for analysis. Other advantages of the ICONICS Software System are the ease of use, ease of setting up screens and the extensive visualization display capabilities for the operators to view real-time data.

Conclusion

ICONICS has worked closely and successfully with Bohr Instrument Services BV to make this Oil Rig Monitoring project successful in every aspect. Bohr Instrument Services BV participates in the ICONICS Large End-User Support and Maintenance program to keep their software updated and for access to technical support personnel as needed.