

# Avocet ESP Surveillance

Online ESP monitoring, surveillance, and performance optimization

## APPLICATIONS

- High-frequency ESP monitoring and surveillance
- Tracking and reporting of lifting equipment inventories
- Nodal analysis-based ESP diagnostic and optimization
- ESP flow rate estimation and well performance monitoring

## BENEFITS

- Continuous ESP surveillance to ensure maximum uptime
- Field overview of current well and ESP operational status with interactive visualization
- Deferred production avoided by responding faster to well events
- Insight to the most prone-to-failure parts of your installations
- Optimized well performance in a collaborative, web-based environment

## FEATURES

- Web-based interface, accessed from a standard internet browser
- Dynamic ESRI-enabled GIS mapping
- Multilevel alarm configuration and intelligent filtering
- Real-time and historical data visualization
- Single- and multistage pump manufacturer's curves display
- Time-based system for inventory tracking and KPI determination
- Integration with sporadic production data
- Compatibility with various data historians
- Custom calculations and reporting
- Inflow performance relationship and pressure traverse charts

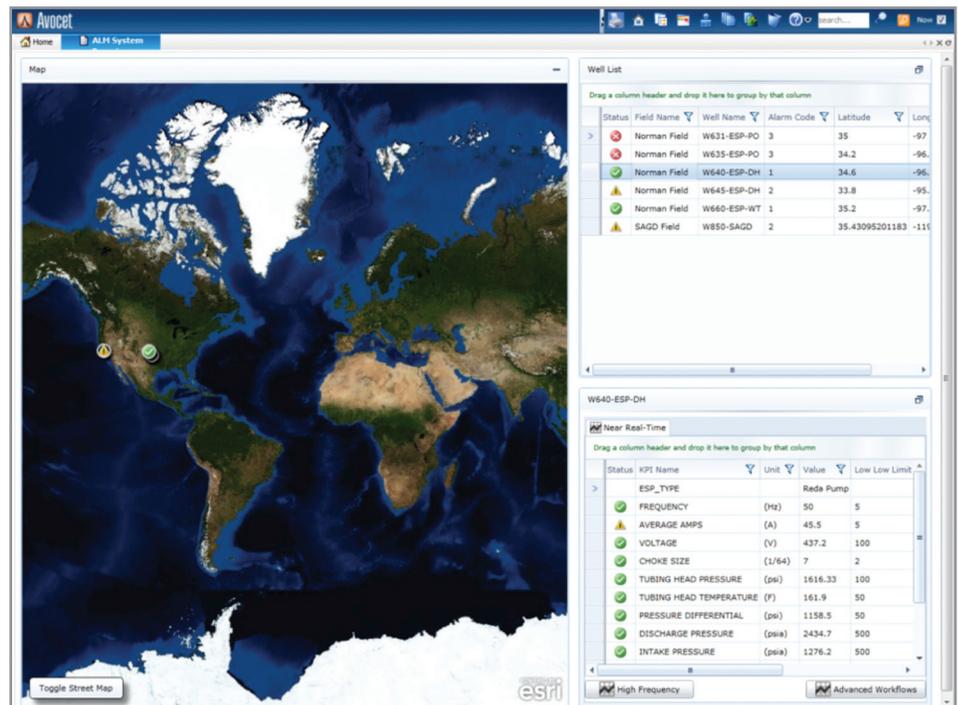
The Avocet\* ESP Surveillance software solution provides real-time monitoring and surveillance for multiple ESP installations via an interactive, web-based display. The software enables better awareness of field ESP operational parameters and helps surveillance engineers focus their initial efforts on problematic wells. It also provides a more collaborative environment to improve artificial lift management efficiency, allowing more time for enhanced reporting and production optimization.

With Avocet ESP Surveillance, information is always at surveillance engineers' fingertips, helping maximize ESP uptime and avoid production shortfalls. It provides a foundation for a variety of workflows to optimize well and field performance, improve confidence in ESP diagnostics, and automate and streamline repetitive tasks and operations reporting.

The software also complements the LiftWatcher\* real-time surveillance service. The synergy brought by these two offerings provides an intuitive solution to address artificial lift equipment surveillance and optimization requirements.

## ESP status at a glance

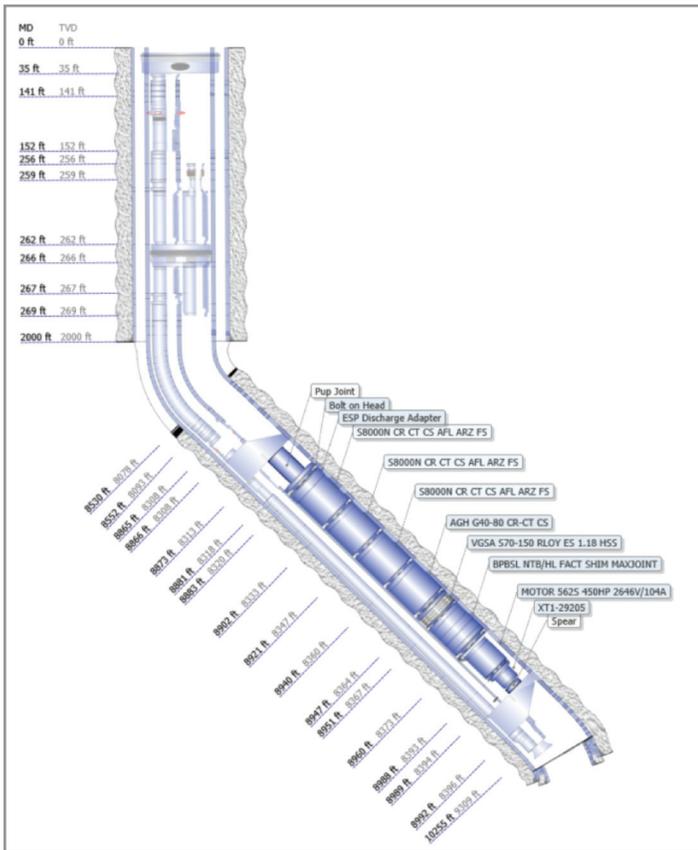
Avocet ESP Surveillance incorporates ESRI GIS mapping technology to give users a comprehensive view of pump performance in a field, complete with geographical context. It is possible to visualize a specific pump's status and access its associated metric alarms—all with a simple click. The software provides access to high-frequency data and advanced workflows based on a preliminary diagnostic, in which critical pump-surveillance events and potential for production optimization can be addressed.



Geospatial information provides a good understanding of an asset's artificial lift equipment health status.



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A detailed wellbore schematic allows the configuration of the equipment string, fully integrated in your production environment.

## Inventory tracking

The time-based Avocet ESP Surveillance interface allows you to effectively manage any type of artificial lift equipment. You can create a new item in the database inventory and follow its entire life span using the intuitive links interface. For example, you can follow the movements of a particular pump from the warehouse to a specific completion in the field, as well as eventual reparations, before being sent to another location. The system supports any KPI reporting requirements—such as pump run life, mean time between failure, and other inventory indicators—and makes them immediately available.

Using its powerful wellbore schematic visualization tool, the Avocet production operations platform is able to display your ESP configuration in the well and highlight any particular part of the completion.

## Pump diagnostic and optimization

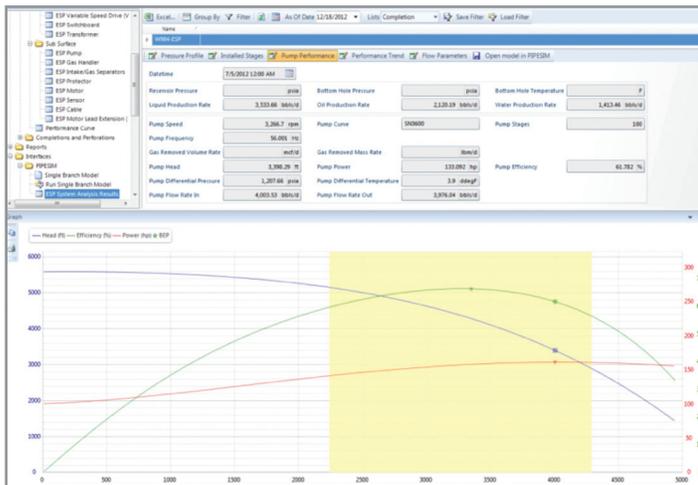
The native interface between Avocet ESP Surveillance and the PIPESIM\* multiphase flow simulator enables your team to work collaboratively on a single, unified online nodal analysis model, which is automatically updated whenever new and relevant information is added. This lets you perform pump diagnostics on the results of a simulation that was automatically triggered, for example, including the latest production well test data from the field.

You can now trend any of the PIPESIM Nodal Analysis outputs with time and detect any change outside of your predefined normal operation boundaries. For any point in time, the updated online model can be opened in the PIPESIM simulator with a single click, allowing further advanced nodal-analysis simulation and interpretation.

## Extensibility to multiple production workflows

Avocet ESP Surveillance also provides extensive production functionality for the Avocet platform, such as network diagrams and allocation, shortfall analysis, and multiphase flow meter surveillance.

E-mail [sisinfo@slb.com](mailto:sisinfo@slb.com) or contact your local Schlumberger representative to learn more.



Pump operating point determination based on well performance (PIPESIM Nodal Analysis).



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