



**SOLUTION SPOTLIGHT:**  
Wellhead Control

# Remote Oilfield Control and Safety

## RESULTS

- Increased asset performance
- Advanced diagnostics aids in predictive and preventive maintenance increased production uptime
- High availability of automation systems in harsh environmental conditions
- Lower TCO - low power consumption, enhanced diagnostics and redundancy on the fly

Through the use of GE Intelligent Platforms' integrated control and safety systems-based wellhead control systems, oil and gas producers are able to reliably manage remote operations under harsh conditions.

Integrated control and safety systems for wellhead automation from GE Intelligent Platforms are successfully being used to enhance safe and reliable operations in Middle Eastern oil and gas fields. Production technology and services company Proserv, in collaboration with GE Intelligent Platforms, is providing solutions to major Middle East oil producers that are designed to improve safety, boost system reliability and reduce critical asset risks under harsh working environmental conditions. The wellhead control systems are based on the GE Intelligent Platforms PAC8000 SafetyNet controller with Proficy® HMI/SCADA – CIMPLICITY.

"From an engineering design perspective our goal is to provide a reliable system that is easy to manage across its life cycle. GE's PAC8000 SafetyNet controllers fit the requirements well and minimize performance risk by providing small footprint, low power, high environmental specifications and safety certification in addition to the local support and services," noted Proserv Vice President of Engineering (MENA Region) Ashish Kaldhane.

As wellheads at remote locations play increasingly critical roles in exploration and production, system reliability and uptime becomes more crucial than ever. RTU failure at remote locations necessitates costly production losses as well as high mobilization costs, increased safety risks and potentially greater regulatory compliance costs. Proserv Middle East's innovative wellhead control systems



can be deployed at onshore production sites where temperature extremes, pounding vibrations and space constraints demand only the most ruggedized control systems.

The PAC8000 SafetyNet integrated control and safety system was proven to be a perfect fit for remote onshore operations. With low power requirements, the control systems are able to be powered by solar panels. And with GE's industry-leading ruggedization, the G3 conformal coated wellhead control systems are able to withstand punishing working conditions in temperatures from -40 to 70° C as well as 30g shock and 5g vibration. Because of increased demand for onshore production, which encompasses harsh environments, extreme climates, and limited space, it is imperative that oil and gas companies increase productivity and resource efficiency while ensuring consistently high quality, reliability, and safety. Proserv Middle East provides a robust solution for safe and reliable system that seamlessly interfaces with the drilling and production equipment. PAC8000 SafetyNet has received Lloyd's Register approval for environmental categories ENV1, ENV2 and ENV3, signifying that it can be mounted as a remote system without compromising safety for offshore applications, quality, and productivity.

To ensure efficient flow of oil and/or natural gas from a well while mitigating risks, systems must provide continuous monitoring and control of critical production parameters such as pressures, temperatures and flow rates. Only through such monitoring and control can oil and gas companies quickly address potential asset and production issues, maximize asset performance, and reduce costly maintenance trips to remote locations. Despite the harsh operating conditions, these wellhead control systems enable the end user to reliably monitor, diagnose and maintain its remote oil and

gas capital assets. PAC8000 SafetyNet features SIL 2 functionality, which delivers reliable control and safety on a common, scalable platform. This also enables the end user to combine multiple wells for maximum efficiency and production optimization.

Fire and Gas safety control and general control and data acquisition inputs are all handled by a single controller, therefore halving the power and footprint requirements of separate control systems. In turn, this means that fewer solar panels and batteries are needed to maintain the control system in these remote oil and gas operations. PAC8000 SafetyNet improves productivity and increases uptime of critical assets through optimization of wellhead controls. Proserv Middle East's customers are able to monitor, diagnose and maintain wellhead control equipment. In addition to ensuring safety, PAC8000 SafetyNet also affords the highest level of asset reliability and productivity, all through a common platform. Integrated systems such as PAC8000 SafetyNet include measurements for tubing pressure, differential pressure and flow, temperature, and analytic capability, in addition to providing feature sets such as built-in intrinsic safety and remote diagnostics capabilities.

GE Intelligent Platforms solutions such as our PAC8000 SafetyNet controller and Proficy HMI/SCADA – CIMPLICITY are helping oil and gas industry OEMs provide equipment that is up to the critical task of consistent operation in remote locations and under harsh operating conditions. The low power requirements of our PAC8000 SafetyNet integrated control and safety system make it ideal for wellhead applications, and GE's legendary ruggedization expertise will keep it operating even under harsh environmental conditions both onshore and off.

### GE Intelligent Platforms Contact Information

Americas: **1 800 322 3616** or **1 434 978 5100**.

Global regional phone numbers are available on our web site.

[www.ge-ip.com](http://www.ge-ip.com)

