CASE STUDY

HALLIBURTON

Middle East

# Intelevate® platform and well manager system optimize ESP performance, reduce OPEX and HSE risks

Digital solution increases uptime, extends run life, and enables remote monitoring

### CHALLENGE

- Monitor diverse well types across multiple fields
- Enable remote monitoring and control
- Integrate with existing IT infrastructure

### SOLUTION

- Real-time pump surveillance and remote VSD control
- Advanced cybersecurity and IT compliance
- Customizable dashboards and data delivery
- 1000+ wireless surface sensors, 700+ wired sensors, and 450+ edge devices deployed

### RESULT

- Reduced field trips by 50%
- Minimized HSE exposure
- Optimized 450+ ESP-lifted wells
- Enabled rapid data-driven decisions

## Overview

An operator in the Middle East aimed to modernize its field operations by replacing legacy SCADA systems with a unified remote monitoring and management solution. The initiative targeted more than 450 wells across multiple fields and included naturally flowing wells and those which used injection or electric submersible pumps (ESPs). The operator sought to improve production, increase uptime, and extend equipment run life while integrating seamlessly with existing infrastructure.

## Challenge

The operator faced a complex set of requirements: connect and monitor diverse well types, ensure interoperability across protocols, and integrate with existing IT infrastructure. The solution needed to support remote control, advanced data analytics, and machine learning capabilities while operating in harsh desert conditions and hazardous environments with hydrogen sulfide ($H_2S$). Field personnel were making two daily trips per well to collect data on pressure, temperature, and ESP performance—posing significant health, safety, and efficiency challenges.

## Solution

Summit ESP®, a Halliburton service, deployed the Intelevate® platform and well manager system. This end-to-end solution digitalized all field assets and enabled seamless communication across multiple protocols. Real-time pump surveillance, remote variable speed drive (VSD) control, and performance audits were supported through dashboards and wireless sensors.

SUMMIT ESP

A HALLIBURTON SERVICE

## Solution

The system incorporated cybersecurity protocols, scalable on-premises architecture, and adaptable visualization interfaces. High-resolution data acquisition and integration from multiple sources improved operation management. The Intelevate platform team and the operator effectively collaborated on data collection and storage using field network communication servers to address operational issues.

## Result

The solution reduced abnormal event response time from 12 to 4 hours per well, preventing 8 hours of production loss per shutdown and delivering an approximate 4% monthly increase in uptime. More than 450 wells were monitored through an integrated SCADA system, boosting ESP uptime. Deployment of 1,000+ wireless surface sensors and 700+ wired sensors improved trend analysis and operational control. Field trips were cut by 50%, from two to one daily visit per well, which lowered HSE risks related to heat exposure and $H_2S$.