



WHY ZENITH? MONITORING

Ensure you get the best from your wells and fields using the latest monitoring and well analysis technology and techniques. Zenith artificial lift and reservoir monitoring technologies are developed from a cumulative bank of industry experience totalling more than 60 years, resulting in **the most advanced, flexible systems available.**

Zenith uniquely let you **choose the parameters you wish to monitor** downhole. Each artificial lift monitoring system is configurable to your technical and economical requirements—parameters can be hand-picked using our Sensor Configurator, and specifications chosen from a multitude of temperature and accuracy ratings.

Our easily installed and maintained systems provide **reliable, accurate data** through inclusion of unique features addressing problems inherent in similar systems available elsewhere.

 *The Zenith Sensor Configurator is included on your Inventory CD and available online at www.zenithoilfield.com*

ARTIFICIAL LIFT & RESERVOIR MONITORING SYSTEMS

A reliable downhole monitoring system is of utmost importance for assessing well and lift system performance.

Reliable measurements surrounding an ESP or other lift system gives an operator confidence in pushing the downhole pumping system to its optimum performance, enabling maximum production with the knowledge that the pump is running within its specified limits. Optimum production and runlife can be successfully and confidently managed with reliable downhole sensor equipment.

Operating an artificial lift system without accurate and reliable downhole sensors can be compared to driving a vehicle in the rain with unreliable windscreen wipers. Driving cautiously and slowly one perhaps can reach a destination without incident but to guarantee a safe and stress-free journey one relies on clear vision through the windscreen.

Comprehensive and fit-for-purpose design allows Zenith sensors to be confidently deployed in their respective environments. Sensors are designed to operate safely up to 150°C (250°C on high temp system) with the capability to survive higher temperatures for shorter periods that may occur, for example, when an ESP is improperly cooled after shut-down. Advanced technology transducers, high tolerance to ESP ground faults and robust overall design have proven the sensors to survive potentially harsh conditions.

Ongoing sensor run lives are continuing past 570 days with many sensors surviving multiple deployments before the need for redress. One particular sensor has been run on four separate pumping systems with a cumulative life of over 440 days before eventual loss of data on its fifth installation.

“ Maintaining this exemplary survivability record is of primary importance. Zenith focus on ensuring customers receive the best service and equipment in the industry, advancing technology to suit your individual requirements. ”



DESIGNED FOR **IMPROVED RELIABILITY**

Proven 150°C tool with 175°C survivability (high temp system rated to 250°C).

Significant ground fault tolerance.

Improved protection/isolation module—enables extended phase-to-ground fault survival.

ESP cable and motor can be electrically Megger tested in the field—enables early detection of potential faults caused whilst running in hole.

Proven auto-clave sealing technology (metal-to-metal seals) utilised on pressure transducers—removes possibility of fluid leaking into sensor.

DESIGNED FOR **INCREASED ACCURACY & ENHANCED ANALYSIS**

Full data accuracy (0.1%) from downhole tool.

No calibration key required at surface—removes issue of incorrect calibration data resulting in misleading, poor accuracy of data.

Advanced transducer technology (MEMS) provides accuracy for draw-down monitoring and sufficient resolution for analysis of well transients.

Continuous intake pressure reading every 5 seconds—no need to manually switch from standard to rapid sample for transient analysis.

User-configurable—monitor only the parameters you require.

DESIGNED FOR **EASE OF USE & IMPROVED SAFETY**

High voltage surface choke offers 5 barriers of protection—ensures personnel not at risk when electrical fault occurs in ESP system.

Removable SD memory card for ease of data collection

“ Zenith E-Series (ESP) gauges demonstrate field-proven reliability, providing continuous client data in a number of locations including high temperature and difficult operating environments. ”

