

MARS™

Mature Asset Rejuvenation
by Surveillance System

Extend Production Life through Real-Time, Reservoir-Data Management

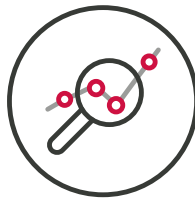
The Weatherford Mature Asset Rejuvenation by Surveillance (MARS) System is the energy industry's most advanced thru-tubing intervention and reservoir-intelligence system. Unified sensors provide distributed-acoustic (DAS), distributed-temperature (DTS) and optical pressure-and-temperature (P/T) data-feeds including non-nuclear, multiphase-flow metering—all in real time. MARS delivers a cost-effective imagery solution that spans the entire length of any well to enable mature-well reservoir enhancement.

Field-proven flexibility creates an all-in-one reservoir-surveillance system that enables continuous, actionable well data for critical management and decision-making.

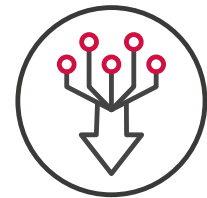
MARS reduces production costs in live wells with precision fluid placements that maximize performance at production intakes throughout the entire reservoir. Data-visualization software then delivers insights through its localized dashboard for live remote access and transmissions via cloud-based iOS/Android applications.



**ADVANCED REAL-TIME
WELL MANAGEMENT**



**ENHANCED
REMEDIAL INTERVENTION**



**STREAMLINED
DEPLOYMENT FLEXIBILITY**

INSTANT INSIGHT TO EXTEND THE LIFE OF THE ASSET



ADVANCED REAL-TIME WELL MANAGEMENT

Integrated DAS, DTS, and PT sensors provide continuous, high-resolution data in real time for optimized production and proactive reservoir management. Instantly identify fluids in the full range of water cut and gas-void fraction (GVF) with the near-infrared (NIR) sensitivity of the multiphase flowmeter (MPFM). Non-intrusive, venturi-affect sonar accurately measures oil and gas and gas-liquid ratios without interruption from flow regimes or slugging by sensing turbulent fluid movement between sensors.

ENHANCED REMEDIAL INTERVENTION

Proactive intervention starts with immediate well data. Non-nuclear flow measurements provide ultra-precise multiphase support that eliminates dedicated separator equipment and frequent human intervention, reducing operating expenses by up to 70%. Identify cased-hole integrity and performance with target detection to improve communication for hydraulic fracturing and interpret data for quick analysis and decision making with advanced wellsite visualization.

STREAMLINED DEPLOYMENT FLEXIBILITY

High-endurance fiberline installation enables a rigless intervention for advanced monitoring in deep, geothermal wells while offering low upfront cost and eliminating the CAPEX requirements. Modular and mobile deployment capabilities along with a single fiberline conveyance simplifies and streamlines operations for even the most challenging wells, minimizing HSE risk and redzone exposure and improving carbon footprint.