Well Integrity Management

MAINTAINING PRODUCTION WHILE MITIGATING RISK

During a well’s life cycle, well integrity issues can lead to substantial gaps in production and potential leaks, increasing both cost and risk to an asset’s current and future production. Halliburton well integrity management (WIM) is a life cycle solution to help extend the life of the well and maximize recovery.

WELL INTEGRITY CHALLENGES

**Structure Integrity** – Casing is your first line of defense against leaks. Corrosion and scale buildup can take your well offline to repair or fix. Halliburton well integrity solutions has a combination of tools to monitor scale, pitting, casing, and tubing thickness, as well as corrosion through multiple casing strings.

**Cement Integrity** – Analyzing your cement bond, condition, and bonding confirms zonal isolation or indicates formation fluid migration through channeling or poor cement bonding. We offer high-resolution solutions, including casing-to-cement and cement-to-formation cement bond evaluation.

**Leak Detection** – Casing, tubing, packers, and other wellbore components can fail or leak in a variety of ways. Pinpointing the source of leaks can catch small problems before they manifest into larger issues that damage the well or decrease the productivity of the well.

**Formation Monitoring** – Increasing production through enhanced recovery methods is desirable for increasing return on your assets. A complete reservoir monitoring project offers insight for decision making based on changing fluid contacts, saturations, reserves, and flood fluid migration through the reservoir.

**Production Index** – Production logging can provide a complete three-phase picture of water, oil, and gas in the well, including the production allocation coming from each perforation zone. In addition, production logging tools can help diagnose production problems, such as leaks, crossflow, and also for injection profile in injection wells.
PURPOSE-BUILT SOLUTIONS

The services and solutions offered by Halliburton are combinable and customized to address specific environments and well integrity challenges. Depending on the challenge, Halliburton has many services that combine to give a robust diagnostic. The technology represented below is a well integrity guide for maximizing asset value.

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<th>Tool/Service</th>
<th>ACX™ Tool</th>
<th>EPX™ Tool</th>
<th>PLT</th>
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<th>CAST™ Tool</th>
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A preventative maintenance program can reduce production downtime and risk. The well integrity baseline is recommended on every well, along with scheduled monitoring on a regular time-based diagnostic. Combining these data points through the well’s life will highlight which areas of the well are degrading and reduce production downtime by an effective planned intervention before failure. Get ahead of the production curve!

COMBINABLE TECHNOLOGY

» ACX™ Tool Acoustic Conformance Xaminer® Service
» EPX™ Tool Electromagnetic Pipe Xaminer® Service
» PLT Production Logging Tools
» PNL Pulsed-Neutron RMT-3D™ and TMD-3D™ Tools
» CAST™ Tool Circumferential Acoustic Scanning Tool
» RBT Radial Segmented Bond Tool
» CBL Cement Bond Log Tool
» MFC Multifinger Caliper Imaging Tool
» DHV Downhole Video Imaging Tool

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

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