

Product True Integrity

Multi Seal Integrity

Validates sealing performance of multiple barriers

What it delivers

Well system integrity depends on the collective performance of the many barriers that form it. A single breach can happen anywhere, at any time, and undermine the integrity of the entire system.

Multi Seal Integrity evaluates the seal performance of multiple barriers, locating leaks and flowpaths throughout the well system, from the wellbore to the outer annuli.

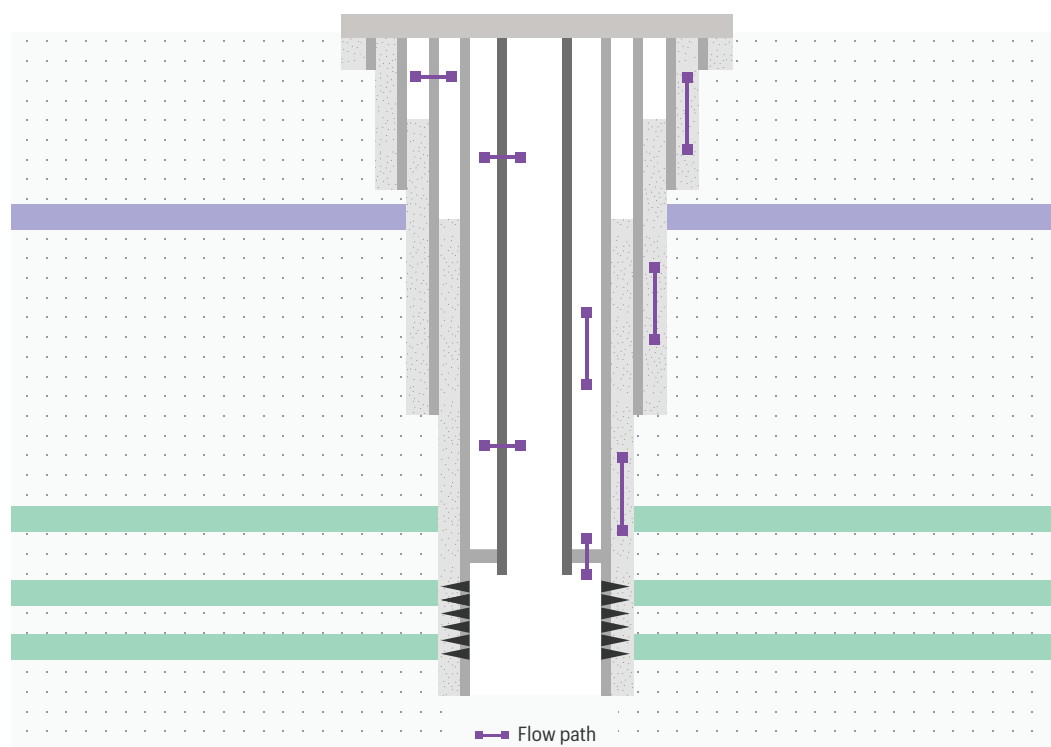
Integrity provides a clear diagnosis of leaks and rogue flowpaths so the right corrective action can be taken.

Multi Seal Integrity is used in a targeted fashion to investigate a known integrity breach anywhere in the well system. Barriers can also be validated proactively to confirm integrity. Either way, Multi Seal Integrity provides the insights needed to restore or maintain a secure well.

Delivered by our True Integrity system using the Chorus (acoustic) platform, Multi Seal

Well sketch shows a range of typical barrier leaks and unwanted flowpaths, that Multi Seal Integrity can diagnose.

Multi Seal Integrity gives you the clarity and insight needed to manage well system performance more effectively.



Challenges

- Evaluate integrity & sealing performance of multiple barriers
- Sustained pressure in one or more cemented annuli [SAP]
- Abnormal production or injection performance
- Barrier leaks and unwanted flowpaths throughout the well system
- Micro-leaks throughout the well system
- Completion component failures
- Planning workover or P&A programmes

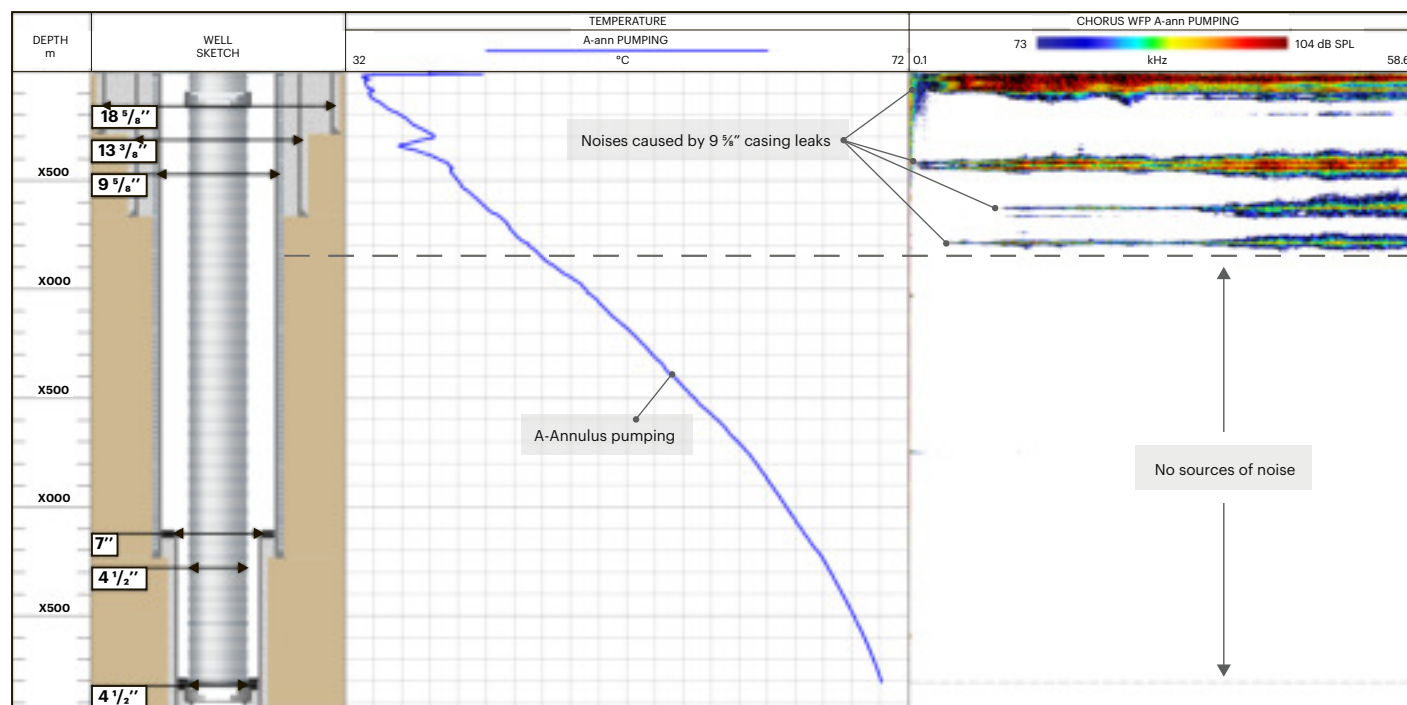
Benefits

- Comprehensive diagnosis of leaks and unwanted flowpaths throughout the well system
- Identify true source of SAP in any annulus
- Locate micro-leaks and flowpaths
- Locate leaks and flowpaths to mitigate integrity risk and ensure regulatory compliance
- Rapid deployment through-tubing minimises disruption and cost
- Better remediation decisions, precisely targeted
- Optimise or validate pre- or -post workover or P&A programmes

Indicative logplot for Multi Seal Integrity

Oil producer was never perforated due to an integrity issue in the A-annulus. Multi Seal Integrity was executed under A-annulus pumping conditions to determine leak points across multiple barriers.

Log plot shows collars of 9% casing is leaking at 35.5m, 85.0m, 122.2m, 196.3m, 419.0m, 443.5m, 628.9m, 665.8m and 789.7m.



Case studies

CS002: Comprehensive diagnostics enables operator to target remediation of gas storage well.

Technical papers

SPE-190888-MS: Subsea Well Envelope Integrity Assessment Utilising Electromagnetic Pulse and Spectral Noise Logging

SPE-188656-MS: An Integrated Approach to the Integrity Diagnostics of Underground Gas Storage

SPE-186129-MS: The Sound of Silence: Innovative Approach to Confirm Barriers using Spectral Noise Logging