What it delivers
Reservoirs are the ultimate source and destination of flow for producers and injectors. The wellbore is just the link between the reservoir and the surface. Ensuring productivity means looking beyond the wellbore, into the reservoir itself.

Reservoir Flow complements conventional wellbore flow diagnostics by evaluating qualitative flow geometry behind casing at the well-to-reservoir interface.

Delivered by our True Flow system using Chorus (acoustic) platform and the Indigo (multisense) platform; Reservoir Flow provides the information needed to manage well system performance more effectively.

Reservoir Flow is commonly used to diagnose unexpected or undesirable well system behavior, but it can also be used proactively to ensure the well system is working optimally. Our Total Flow product should be used for a more complete diagnosis.

Well sketch shows a range of typical behind casing flow scenarios – that Reservoir Flow can locate and quantify.

Reservoir Flow provides the clarity and insight needed to manage well system performance more effectively.
Reservoir Flow example logplot.

A deviated oil producer exhibiting high water cut (96%). Wellbore flow profile shows the main liquid inflow coming from the lower perforated interval. However, the drift-corrected Chorus Acoustic Power Spectrum (APS_DC) together with Indigo temperature profiles, reveal significant flow activity at the upper perforated interval and to a lesser extent at 3985m and fractionally at 4108m. The main source of water is arriving from the perforated formation. Further investigation with Total Flow is recommended.

**Challenges**
- Evaluate flow geometry across the reservoir layers
- Unexpected change in production or injectivity performance
- Unexpected water or gas breakthrough
- Suspected cross-flow behind-casing
- Input for recalibrating reservoir model
- Reservoir flow assessment and characterisation / reallocation

**Benefits**
- Understand the true sources of production and assess flow geometry qualitatively
- Know where injection fluids are going and assess flow profiles
- Identify cross-flow and thief zones
- Locate source of water or unwanted gas
- Identify field development opportunities
- Understand natural fractures

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**Case studies**
CS015a: Detailed characterisation of flow contributions and fluid types enables operator to optimise operations
CS015b: Detailed characterisation of injection profiles enables operator to optimise water flood operations

**Technical papers**
SPE-191560-18RPTC-MS: Water Source Identification and Inflow Profile Determination in Horizontal Wells after Multistage Hydraulic Fracturing Using Passive Location Method and Temperature Modelling
SPE-191290-MS: Quantification of Reservoir Flow using Noise and Temperature Logging
SPE-181984-MS: Multiphase Inflow Quantification for Horizontal Wells Based on High-Sensitivity Spectral Noise Logging and Temperature Modelling

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