PINPOINT THE PROBLEM

Fluid flow behind the casing generates sound, which we can track. The more precisely you can capture those vibrations, the higher the probability of pinpointing and mitigating the unwanted fluid flow on the first attempt.

As part of an industry-exclusive service, the Weatherford Geophone Array Production Survey (GAPS) service profiles and pinpoints background noises and flow direction throughout the length of your well. Using our patented* GAPS process, we hone in on the location of the unwanted fluid flow and precisely target the remediation services.

Multiple sensors in the GAPS service create a log plot that identifies noises originating above, below, and lateral to the array. This well log identifies areas behind the casing where fluid is flowing, with a precision that was unachievable before the GAPS service. The multicomponent sensors produce directional measurements and record lower frequencies than can be detected with conventional hydrophone-based noise tools.

DETECT SOUNDS WITHOUT RELYING ON WELBORE FLUIDS

Deployed by wireline truck, the GAPS service records sounds transmitted through the casing.

Electromechanical locking arms press the sensors against the casing

Casing-transmitted sounds eliminate reliance on wellbore fluids

Enhanced sound sensitivity enables detection of frequencies and flow rates beyond the threshold of standard noise tools.

LOCATE FLUID SOURCES WITH MORE PRECISION

At even the lowest frequencies, our GAPS service detects surface-casing vent flows, leaks, and gas-migration issues.

Four geophone sensors with three directional components in each detect noises in the wellbore

Recorded data analysis distinguishes between vertical and horizontal flow

Multiple-sample interpretation helps to differentiate between sounds and improve source detection

INCREASE REMEDIATION EFFECTIVENESS

Our GAPS service serves as an important step in preparing for casing remediation success.

Geophone array captures more samples for increased accuracy in interpretation of flow

Precision source locating improves placement of perforation and squeeze work to solve the problem

Leak elimination mitigates threats to the environment, safety, and reputation

Find out how to pinpoint the problem in your well at weatherford.com/gaps