Julian Martin, Texas

Historically, mechanical pressure tests have been used to evaluate integrity breaches anywhere along the well system, whether they occur in operational wells, temporarily abandoned wells, or plugged and abandoned wells. This strategy has been demonstrated to be partially successful because to a lack of prior knowledge on the real hydraulic sealing of the completion elements: casing shoes, casing-cementformation bonding, overcharge formations, and aquifers, for example. Because the source of effluents are frequently unknown, many of the operations conducted in such wells are blindfolded and must be repeated over time, resulting in inefficiencies and increased costs. Technological improvements have provided new methods for diagnosing wells thru tubing, allowing for more accurate evaluations of the mechanical and sealing condition of such wells. These technologies can be used in a variety of completion configurations to determine the isolation and sealing capabilities between formations, casing-cement-formation, current or potential effluent sources, and so on, which are critical variables when designing a proper repair or well abandonment operation. This the above in mind and following recently released Norsok standard D-10:2021 last January 2021, I would like to suggest the addition of passive acoustic technologies to verify: 1. Active sources of reservoir fluid movements such as cement hydraulic isolation (having cement bonding doesn't mean you have hydraulic seal, casing/completion leaks, formation x-flows, fluid flows towards aquifers, etc which goes beyond the simple pressure test performed currently.