### CHALLENGE
Perforate two new intervals and reperforate a producing interval in underbalanced conditions without deferring production.

### SOLUTION
Use ACTive OptiFIRE® CT real-time selective activation system to perforate the selected zones and confirm downhole detonation instantaneously.

### RESULTS
Successfully perforated all three intervals, increasing well production by 18%.

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**Underbalanced conditions present perforating challenges**
After decades of strong production, a brownfield in Latin America struggled with economic and operational challenges. To enhance declining flow rates, the operator planned to perforate two new intervals and reperforate a critical zone. In an effort to prevent deferred production and remove formation damage, the operator needed Schlumberger to perform the perforating job on a live well during underbalanced conditions.

**ACTive OptiFIRE system accurately perforates and measures in one run**
Schlumberger deployed the ACTive OptiFIRE system, a first-of-its-kind coiled tubing technology that eliminates the need for a ball drop or pressure-pulse system to activate shaped charges. Using advanced fiber-optic technology, Schlumberger accurately placed the perforating guns into the three selected zones and perforated the well. Casing collar locator (CCL), pressure, temperature, and accelerometer data confirmed downhole detonation in real time.

**Live coiled tubing job sets record time while increasing production by 18%**
After the intervention, the operator realized a production increase of 18%, and the ACTive OptiFIRE system reduced perforating gun detonation time by 75%.

The absence of working fluid dramatically reduced HSE risk during the underbalanced perforating intervention, as it eliminated the need to hydrostatically load the well as part of the operation. Because the intervention was performed on a live well, the operator avoided deferred production and nonproductive time associated with conventional perforating methods.

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*Initialization of the joint well intervention—wireline rigless deployment of the ACTive OptiFIRE system’s bottomhole assembly.*
Real-time confirmation of downhole detonation using the response of (from top to bottom) temperature, pressure, accelerometer, and CCL data.