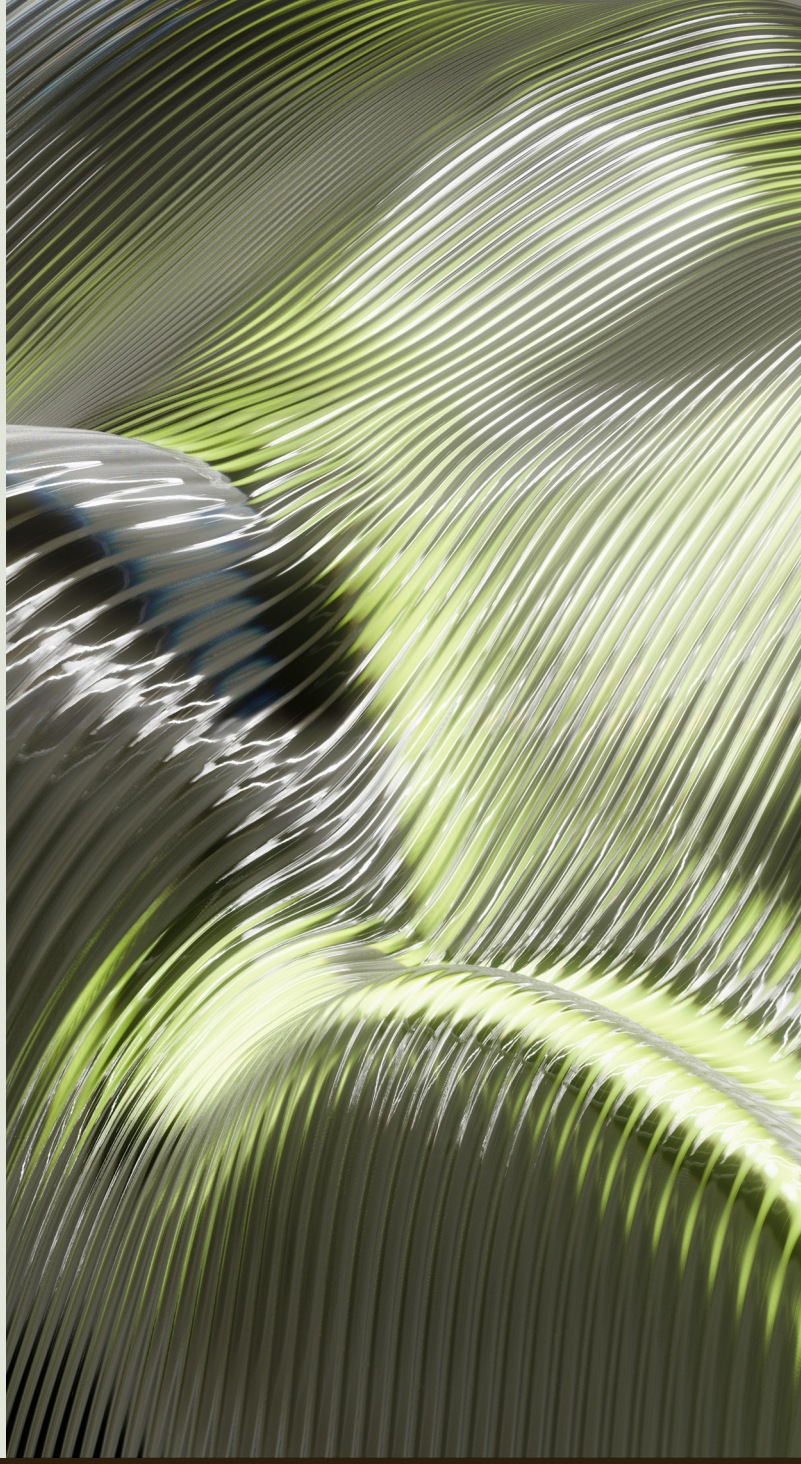
ShearLift-A™: GLV With Temporary Locking Device



Region
Brazil, Americas

Year
Jan 2025

Case Study

Interwell

Challenge

The main operator in Brazil has identified over 25 cases of failure in gas lift valves, characterised by unwanted flow from tubing to annulus. Out of these, at least 14 cases have required a rig intervention to replace the damaged valve. These failures typically occurred in the early production stage, before gas lift injection had been initiated in the well. In the Pre-Salt Buzios field, it is expected that most wells will operate for 5-10 years without gas lift, which would only be necessary in the later stages of production.

Solution

To minimise both safety risks and intervention costs in this scenario, it was decided to Install gas lift valves with a temporary locking device (ShearLift-A™), that works as a dummy valve until the locking device is sheared open by applying differential pressure from annulus to tubing. The check design eliminates vibration and chattering, and protects the metal-to-metal seals from erosion. This solution is suitable for harsh environments (H2S and CO2), and CFD simulations and erosion are provided.

The first valves were installed in February 2024, one of which sheared open at the expected values (SP +-5%). In the coming years, it is expected that the operator shears open the valves installed according to each well's necessity.

Value Created

Due to incremented well barrier integrity using this solution, the client estimates saving around 3.5 million USD on each well. Year to date, 30 units of ShearLift-A™ were supplied; which can result in approximately 115 million USD saved.

Key Capabilities

- → True metal-to-metal back check seal
- → Barrier qualified
- → Square-Edge, Stealth and Venturi orifices available

Benefits

- → Time-efficient, as no wireline intervention is required before production start-up
- → Minimises the need for interventions

Typical Applications

- → Gas life projects with single SPM
- → Surgent wells with the further need of artificial lift system

References

- → https://alrdc.com/wp-content/uploads/2024/03/Application-of-Shear-Gas-Lift-Valves-in-the-Pre-Salt-Buzios-Field.pdf

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ShearLift-A™