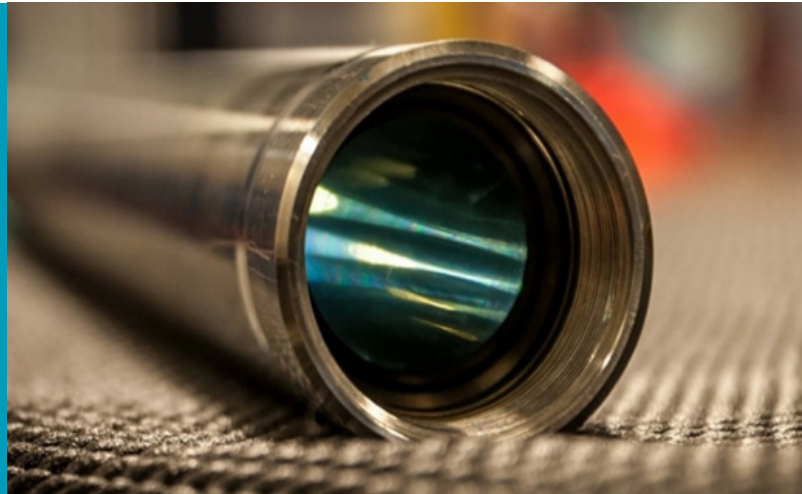


Expro Excellence

# Mercury measurements in shut-in wells using the downhole Non Reactive Sampler

Well Flow Management | Fluids



## Objectives and background

- Expro's client had a well that had been shut in for a number of years due to formation water break through, which they wanted to return to production
- The well could not flow back to production without confirming contaminant levels were within acceptable limits
- As a subsea development, downhole sampling from a lightweight intervention vessel was the only option for the client
- Expro's Non-Reactive Sampler (NRS) provided a unique opportunity to obtain representative mercury data
- The client needed to confirm mercury concentrations from both water and hydrocarbon producing zones

## Expro Excellence

- Expro deployed a sampling string consisting of three NRS in conjunction with three Pressure Compensated Samplers (PCS)
- Tools were configured in a bundle with electronic clocks to trigger sampling at different depths, at predetermined times
- All samples were captured as planned and retrieved to the surface
- Mercury analysis was performed on the vessel immediately after the tools reached the surface to ensure the most representative measurement, using atomic absorption technique for high accuracy
- PCS were transferred to transport cylinders

## Value to the client

- Within the constraints of the operation, Expro were able to obtain representative samples and give accurate mercury data on the well fluids
- Using Expro's novel NRS, the unique mercury capture mechanism ensured that all mercury remained in the sample until analyzed, with no losses due to scavenging
- Mercury concentrations were quantified in all samples
- The client was able to confirm that mercury concentrations were within specification and was, therefore, able to bring the well back into production
- Our sampling and analysis were delivered with zero NPT

### Insight



### New technology

