

Diver Operated Subsea Sampling Unit Subsea Sampling



Client:

North Sea producer

Location:

North Sea

Equipment:

Subsea sampling system that allowed capture and containment from a flowing well at 1,000 psi

Project Background

A subsea pipeline restriction, at a water depth of 100 metres, was impacting production to the extent that a North Sea producer was losing thousands of barrels of oil per day.

The potential for wax deposition had been unaccounted for at the design stage, due to the mismanagement of samples and analysis, and noticeable quantities were accumulating in the flowline. Without representative samples, remediation methods failed to alleviate the problem with costs running into millions of dollars for pumping chemical treatments via an intervention vessel.

Solution

Proserv was approached by the operator with a request to provide a system that allowed for the safe capture and containment of subsea samples taken from a flowing well at 1,000psi.

The samples needed to be upstream of the restriction to ensure they were as representative as possible of the fluid chemistry entering the pipeline. A diver operated sampling system qualified for use in harsh subsea environments was supplied that could take up to 12 litres of sample per run.

Scope

Subsea samples taken were upstream of pipeline deposits, therefore representative of inlet pipeline chemistry. This meant the operator could optimise future chemical treatments, with chemical free crude, and reduce the risk of repeat blockages. This ability to subsea sample saved the operator millions of dollars in well intervention and workover costs that would have been required to obtain a representative sample of the reservoir fluids.

Benefits

- Slops containment
- Ability to back flush, to clear lines
- A closed system, designed to discharge to sea, or return to process
- Maintenance of the samples at constant temperature and pressure



Subsea Cylinder,
20000 psi, PED, DOT