

## DUALFLOW

The leading solids removal solution on the market.

The DualFlow 5K PSI unit uses next generation cyclone technology that was developed and engineered by FourPhase and is the leading solids removal solution on the market.

The DualFlow is used in surface applications where solids might be present during production or intervention cleanup applications.

## CASE STUDY

# SANDABAND CLEANOUT - PREPARATION FOR P&A OF 3 WELLS

## NORTH SEA

FEBRUARY 2016

### CHALLENGE

A wellbore was scheduled for permanent plugging and abandonment (P&A). In preparation for the P&A, a wellbore cleanout had to be carried out accompanied by a Coiled Tubing (CT) operation. The operator chose Sandaband as a plugging material. (Sandaband is a combination of non-consolidating, non-segregating and non-shrinking high-strength quartz particles.)

Operational considerations:

- Circulate out the Sandaband plugging material and perform wellbore cleanout
- Separate and collect the Sandaband particles (0.1 µm – 2500 µm)
- Limited deck space due to simultaneous operations
- Large slugs of finest Sandaband particles (<10 µm) expected (estimate: 1 tonne per hour)

### SOLUTION

The solution was to perform a wellbore cleanout using Coiled Tubing, accompanied by two 5K DualFlow units hooked up in series due to contingency issues allowing safe flowback and separation of Sandaband particles. There was minimal deck space available due to ongoing CT operation, however we managed to install two 5K DualFlow (2 m x 2 m x 3.2 m) units due to its very compact design.

### RESULT

The Operator recognized the cleanout operation of Sandaband as a success. The DualFlow units demonstrated excellent separation of the large amount of, even very fine, Sandaband particles during flowback.

Key operational outcomes:

- No recorded HSE incidents.
- No recorded equipment downtime
- 100% Cleanout
- A total of 8,978 kg of solids were separated



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