

## \$3.7M/Month unlocked through 12% production increase Norwegian North Sea, 2018

**\$3.7 M/month**

Increased revenue

**Zero**

HSE Incidents or manual handling

**0 h**

NPT (22 257h operation)

**400 000 Sm<sup>3</sup>/d**

Solids separated

### Challenge

A major Norwegian operator was losing production opportunities due to resin-coated proppants left in the well after a frac job. These solids couldn't be routed to the production separator due to HSE and environmental regulations.

The goal was to continue production and gather empirical well data while cleaning out the remaining proppants, without violating discharge rules or risking equipment.

The choice was binary: either keep the well shut in and lose revenue or find a way to safely manage the solids flowback topside. Estimated deferred revenue: \$3.7M per month.

### Solution

FourPhase deployed a rental DualFlow desander unit with 150mm liners in Series Mode - engineered to efficiently separate fine sand and resin-coated proppants.

The system was quickly mobilised, easy to integrate, and connected to the PWV upstream with a return line tied back to the production separator. The setup actively safeguarded downstream equipment, preventing solids from reaching downstream equipment.

The unit ran continuously for over 22,000 hours with 0% NPT and no manual handling.

### Result

Overall, the campaign enabled an estimated \$3.7 million in additional monthly production, while maintaining full HSE compliance and operational continuity. The well produced more and more gas since July 2018, gas rate has increased with approx. 380 000Sm<sup>3</sup>/day since the start. The well received pressure support from another well on neighboring platform which made a good contribution for the increased rates. Before eventually shutting down the gas rate was above 400 000 Sm<sup>3</sup>/day and it was stable return with solids, estimated to be approx. 40% sand and 60% proppants.

DualFlow total solids separation: 50 037kg  
Average Cyclone Efficiency: 99,7%

