

Managing solids from high gas producer UK North Sea, September 2020

46 MMSCF/D

Gas Flow

100 %

Closed loop system, no hydrocarbon exposure

Zero

HSE issues

0 hours

NPT

98.3 %

Customer satisfaction

Challenge

A well was shut in due to an expected high solids production combined with high gas rates. The target was to beam up the well and clean out any solids.

To enable safe solids management, hydrocarbons were required to be contained at all times, including during flushing of vessels. Production engineers expected transient sand which would be mobile at lower drawdown. The estimation for solids expected back was approximately 500 kg sand produced at a rate of 3.6 kg/hr. Limited deck space required a minimal footprint solids management system.

Solution

Mobilising a complete closed loop solids management system including:

- 2x DualFlow desanders
- 2" Fig 1502 Pipework package and hoses
- 2x Closed Solids Tanks

Due to limited deck space and limited crane access, movement of equipment within the operational area was carried out successfully on a skating system with no issues. Rig up and commissioning was completed in 8 days (including meetings).

Result

The operation was successfully completed with solids separated at a gas flow at 46 MMSCF/D. Using the Closed solids tanks with associated piping all hydrocarbons were safely contained during the whole operation. The well was flowed back through 2 x DualFlow units with ESV valve, D27 4" pipework upstream, two x choke manifolds and ESV downstream.

With a 2x2m footprint per automated desander, minimum deck space and POB was required, removing risks associated with heavy equipment and high POB.

