

# Case Study

## Frac Sleeve Protects Xmas Tree During Frac Campaign



PRODUCT: XMAS TREE FRAC SLEEVE

### Project:

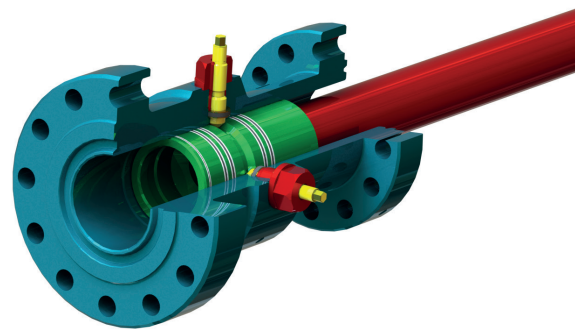
A major oil and gas operator undertook a hydraulic fracturing campaign to unlock further reserves from a reservoir with declining production in the northern North Sea. The Xmas Trees on the low producing wells were not sufficiently rated to withstand the hydraulic frac pressures planned for the operation.

Unity designed and manufactured Xmas Tree Frac Sleeves that would allow the existing Xmas Trees to withstand the high pressures exerted on them during the campaign.

- The system prevented a new Xmas Tree being required, saving over £200,000, and avoiding a delay of around 12-18 months, plus the loss of production over that time.
- The Frac Sleeve helped the operator access hundreds of thousands of pounds in extra hydrocarbon revenue from a previously low producing well.

### Solution:

- Each Xmas Tree Frac Sleeve comprised a spool with the relevant bottom connection to suit the respective xmas tree and an internal hanger/sleeve assembly that sealed in the seal bore of the respective tubing hanger.
- The Frac Sleeve was designed as a single piece forged body in which the sleeve hanger located and sealed inside.
- A lock down arrangement in the Frac Sleeve prevented upward movement of the internal hanger/sleeve assembly.
- The Xmas Tree Frac Sleeve increased the pressure rating capabilities of the Xmas Tree by 20%, allowing the frac campaign to take place.



#### Aberdeen

Wellheads Crescent, Dyce, Aberdeen, AB21 7GA, UK  
T: +44 1224 937600

#### Esbjerg

Øresundsvej 11, 6715 Esbjerg North, Denmark  
T: +45 7370 9550

#### Great Yarmouth

1 Bessemer Way, Great Yarmouth, Norfolk, NR31 0LX, UK  
T: +44 (0) 1493 653555

[enquiries@unitywell.com](mailto:enquiries@unitywell.com) [www.unitywell.com](http://www.unitywell.com)