



# NORWAY, DEEPWATER

CUSTOMER MAKES UROS-CT THE PREFERRED CHOICE TO REPLACE SUBS IN THEIR DEEPWATER WELLS IN NORWAY

<b>Region:</b>	North Sea
<b>Type:</b>	Deepwater

<b>Country:</b>	Norway
<b>Field:</b>	Ekofisk

## THE CHALLENGE

A customer in Norway needed a centralizer package suited for a specific close tolerance operation in a deepwater well with a total depth of 9,778 TVD RKB ft and 16,614 MD RKB ft.

The desired solution had to provide a reduced insertion force, and low running force, tested and proven in the restriction; along with suitable standoff and a high axial stop collar load capacity - all at a low cost to meet close tolerance capabilities. For this specific well they needed to run a 17" liner through a wear bushing restriction with an ID of 17.75" to 3,295 TVD. Traditional close tolerance applications for this type of work would be the extremely high cost centralizer sub.

## THE SOLUTION

To meet the challenge Centek, Halliburton and Ace Oil Tools recommended the Centek UROS-

CT centralizer and a new type of stop collar (Ace Ratchet Collar).

The UROS-CT close tolerance centralizer is specifically designed for use in tight annulus applications, where narrow margins between pore pressure and the fracture gradient exist. In deepwater operations the UROS-CT can compress virtually flat to allow travel through the series of tight casing strings but is still capable of expanding to the designed open hole size.

In this instance, the UROS-CT was used in conjunction with the Ace Ratchet Collar provided by Ace Oil Tools. This stop collar contains high axial load capacity along with a slim design (4.1mm WT). The stop collar consists of two parts being pushed together and locks in place with a ratchet mechanism. It is easy and fast to install and will give an axial holding force of 103,000 lbs in this particular design and size.



## THE RESULT

By using the Centek UROS-CT centralizer and Ace Ratchet Collar in combination all of the requirements from the customer were met and the 17" liner safely passed through the tight restriction without issue.

*This combination is now the preferred solution for this type of application in the North Sea.*

EXCELLENCE TO THE CORE