



# WWT Non-Rotating Protectors

WWT Non-Rotating Protector Provides  
25% Torque Reduction, 11% Drag Reduction  
Case History – Europe - 11772

## WWT NRPs Significantly Reduce Torque and Drag in ERD Well

### Executive Summary

An operator requested the use of WWT NRPs to reduce the torque while drilling 3 sections of an ERD well:

- 12-1/4 in. (pilot hole):  
4,600 – 6,732m MD
- 12-1/4 in. x 13-1/2 in. (main hole):  
4,725 – 6,155m MD
- 8-1/2 in. x 9.15 in. (main hole):  
6,155 – 8,349m MD

129 x SS3-658 NRPs were installed to target the areas of highest side forces in the build and into the tangent from 925 – 2,525m MD.

### NRP Performance

Actual torque and hookload were backmodeled. Results showed a torque reduction of 25% as well as a reduction of 11% in Pick Up weight, indicating that NRPs were effective in reducing rotating and sliding friction. All NRPs were in good condition at the end of the job. The same set of NRPs was used for all sections, drilling a total of 5,793m and approximately 2.1 million revolutions.

