



Weatherford®

REAL RESULTS

LoTORQ™ Centralizer System Reduces Wear and Friction on World's First Offshore Drilling-with-Liner Project

Objectives

- Minimize wear and friction in a potentially unstable shale formation in the North Sea while drilling with the casing liner.

Results

- Weatherford supplied 24 non-rotating drilling-with-casing (DwC™) centralizers and 84 LoTORQ 9-5/8 in. × 12-in. mechanical-friction and wear-reduction centralizer systems.

Value to Client

- The DwC and LoTORQ centralizers enabled the project to achieve exceptionally low friction and rotating coefficients, significantly contributing to the drilling program's success while saving Statoil valuable rig time.
- The successful use of steerable drilling-with-liner technology was the first ever performed on an offshore platform.



Weatherford's non-rotating *DwC* (left) and *LoTorq* centralizer (right) systems have been proven in some of the world's most challenging wells. These unique systems perform independently of drilling and completion mud-film strength or lubricity, achieving exceptionally low friction factors with rotating coefficients in cement.

Client
Statoil

Location
North Sea, Norway

Date of Operation
July 2009

Rig Name
Brage platform

Formations
Shale

Hole Size
12-1/4 in.

Depth
13,297 ft (4,053 m) measured depth

Products/Services

- 9 5/8- × 12-in. non-rotating *DwC* centralizer (24)
- 9 5/8- × 12-in. *LoTORQ* centralizer (84)

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