



# Weatherford®

## REAL RESULTS

### Drilling-with-Liner (DwL™) Eliminates Mill Run, Saves Two Days and Reduces Operator's Costs

#### Objectives

- Access the Valhall reservoir by drilling through cap rock with a liner, to prevent losses and wellbore instability.

#### Results

- Drilled with 9 5/8-in. liner from the high-pressure cap rock into the lower-pressure reservoir three times with no failures.
- Drilled through 98 ft (30 m) of shale with occasional hard limestone stringers.
- Drilled out the Defyer™ liner with an 8 1/2-in. PDC bit fitted with a primary directional assembly.

#### Value to Client

- The *Defyer* assembly with the 9 5/8-in. liner provided adequate blade and body strength to drill through the cap rock into the reservoir, providing access to the reserves.
- By eliminating the need for a milling run, this approach provided a 48-hr reduction in drilling program time.
- The *Defyer* assembly delivered repeated reliability, successfully completing the three wells.



**Client**  
BP

**Location**  
Norwegian sector, North Sea

**Depth**  
A12C 9,324 ft (2,842 m) MD  
A11B 10,613 ft (3,235 m) MD  
F13A 10,062 ft (3,067 m) MD

**Liner Size**  
9 5/8-in. drilling liner

**Number of Wells**  
3

**Products/Services**

- *Defyer* DT
- DwL technologies