



# Weatherford®

## REAL RESULTS

### Weatherford's RedHead® Motor Technology Provides the Muscle Required for Successful QuickCut™ Performance

#### Objectives

- Create a single-trip exit for applications with restricted rotary speed (40 RPM or less) and restricted flow.
- Create a single-trip exit with the shallow-angle *QuickCut 2°* system, using a *RedHead* downhole motor.

#### Results

- Successfully created a single-trip window while using a 4 3/4-in. OD *RedHead* downhole drilling motor.
- Milled window and 12 ft (3.7 m) of rathole in 5-1/2 hr with a 4.4-ft/hr (1.3-m/hr) rate of penetration.
- Mill gauge loss was 1/16 in. or less.

#### Value to Client

- Tests were part of preparations for a TTRD application in the North Sea and proved a more economical alternative to pulling the completion string.
- Production of single-trip windows without excessive work-string rotation protected the downhole deployment valves in the casing string.
- Tests demonstrated potential applications for milling with motors: extended-reach drilling, restricted rotary applications, TTRD applications, and wells with high dogleg severities.
- Standard 3° *QuickCut* system and contingency plans were also successfully tested, using the same Weatherford *RedHead* motors in preparation for field use, providing yet another option for the operator.



#### Location

Weatherford Technology and Training Center, Test Rig No. 1

#### Whipstock OD

5-1/2 in. (140 mm)

#### Concave Angle

2°

#### Concave Length

13-1/2 ft (4 m)

#### Casing

7 in., 26 lb/ft and 7 in., 32 lb/ft

#### Drilling Motor

4 3/4-in. OD, 7:8, 5-stage

#### Products/Services

- *RedHead* motor
- Shallow-angle *QuickCut* casing exit system