

# Shallow-Angle QuickCut™ Casing-Exit System Creates Casing Exit Windows Through Three Concentric Strings in 1 Trip

## Objectives

- Maximize reservoir exposure by milling a shallow-angle casing-exit window from an offshore platform. At the planned exit depth, the project requires milling through three concentric casing strings to reach the reservoir.
- Provide an optimal window geometry—smooth and with a clean shape—that will enable efficient drilling and liner-running operations.
- Minimize wellbore drilling time by providing a sidetrack at the optimal kick-off depth.

## Our Approach

- Working closely with the client, Weatherford deployed a casing-exit team for a thorough pre-job analysis. The team proposed use of the shallow-angle QuickCut casing-exit system and a hydraulically actuated MultiCatch™ whipstock anchor.
- The team ran the casing-exit system downhole and hydraulically set the whipstock anchor at a depth of 4,805 ft (1,465 m). The milling assembly was sheared from whipstock and milling commenced immediately.
- The team milled through each of the three casing strings—first the 7-in., 23lb/ft; then the 9 5/8-in., 40lb/ft; and finally the 13 3/8-in., 68lb/ft—and left an additional 15 ft (4.6 m) of rathole. The operation was completed in one trip in just 2.55 hr.
- Upon analysis at the surface, the team found negligible wear to the milling equipment, which eliminated the need for a remedial milling trip. The client initiated drilling operations for the new lateral and encountered no restriction or difficulties in running the drilling assembly through the window.

## Value to Client

- Use of the shallow-angle QuickCut casing-exit system enabled a single-trip casing exit through three concentric casing strings. The operation provided a long window that enabled the desired drilling assembly to pass uninhibited and continue drilling to maximize reservoir exposure.
- By milling through three casing strings in one trip, the operation saved 2 days of rig time that would have been required to set additional whipstocks.
- The durability and negligible gauge wear of the mills eliminated the need for a remedial milling trip.



Using the shallow-angle QuickCut system, a Weatherford casing exit team milled through three concentric casing strings in a single trip with no remedial work required.

### LOCATION

Offshore Saudi Arabia

### WELL TYPE

Oil

### FORMATION TYPE

Limestone

### CASING SIZES AND TYPE

7-in., 23lb/ft  
9 5/8-in., 40lb/ft  
13 3/8-in., 68lb/ft

### CASING EXIT ID

6.125 in.

### CASING EXIT DEPTH

4,805 ft (1,465 m)

### CASING EXIT INCLINATION

42° left of high side

### MILLING FLUID

10.9 ppg oil-base mud

### PRODUCTS/SERVICES

- Shallow-angle QuickCut system
- Hydraulic MultiCatch whipstock anchor

