

RipTide® Ball-Drop Drilling Reamer Passed Through Collapsed Casing, Enlarged and Drilled Interval in One Run, Preserved Original Well Design

Objectives

- Drill through multiple tight spots within 16-in. casing suffering collapse issues
- Enlarge and drill the interval simultaneously

Our Approach

- After setting the 16-in. casing at a measured depth (MD) of 5,898 ft (1,798 m), the customer tried to drill the next interval with a 14 1/2-in. drilling assembly (drift ID was 14.688 in.). Multiple tight spots within the 16-in. casing prevented the customer from reaching the bottom of the hole.
- In collaboration with the customer, a Weatherford drilling engineering team opted to run a 12 1/4-in. drilling assembly to achieve the target objective and maintain the planned well design.
- Weatherford experts incorporated a RipTide ball-drop drilling reamer 12000 in the bottomhole assembly (BHA) as well as a Magnus® rotary-steerable system (RSS) to simultaneously drill and enlarge the interval.
- The RipTide reamer is a concentric mass-balance underreamer capable of enlarging a borehole below casing restrictions. The versatile reamer can simultaneously drill and enlarge when used in conjunction with a RSS, motor, or rotary bottomhole assembly.
- Field personnel successfully deployed this BHA, drilling and enlarging the interval from 12-1/4 in. to 14-1/2 in. in one run.
- This achievement enabled the customer to maintain the original well design by successfully deploying a 11 7/8-in. casing across the interval.

Value to Customer

- Weatherford's hole-enlargement-while-drilling solution enabled the operator to eliminate additional costs with well design changes (e.g., sidetracking) while also maintaining the long-term value/production volumes associated with the well as per the original well design.
- Efficient drilling performance achieved during the execution of this project resulted in the customer recommending the deployment of RipTide reamers in similar projects.



The Weatherford RipTide ball-drop drilling reamer 12000 has retractable and concentric cutter blocks that minimize vibration while drilling and facilitate tool retrieval.

LOCATION

Gulf of Mexico

FORMATION

Shale

HOLE SIZE AND ANGLE

12-1/2 in. (31.75 cm), 14.9° (slant)

FLOW RATE

656 gal/min (2483.23 L/min)

TEMPERATURE

230°F (110°C)

TORQUE

21,000 lb-ft (28472.18 N·m)

MEASURED DEPTH

5,898 ft (1,798 m)

PRODUCTS/SERVICES

- RipTide ball-drop drilling reamer 12000
- Magnus RSS

