

## Vero<sup>®</sup> Automated Connection Integrity Made Up 3,000 Connections, Saved Over 42 Hours of Rig Time for Major Operator in Deepwater Gulf of Mexico



The Vero system replaces human judgment and influence with computer-controlled consistency and accuracy during makeup, completing the entire connection makeup and evaluation process using an onboard computer, sensors, and programming.

### Objectives

- Introduce automation to improve the makeup reliability of each connection.
- Deliver higher tubular running efficiency per well.
- Minimize personnel risk and exposure in the red zone.

### Our Approach

- Weatherford's Global Business Unit, engineering, and operations teams collaborated with the customer to establish very specific KPIs for running efficiency which faced a high level of customer evaluation to prove the results.
- Used for applications on large offshore rigs, the Vero 22-150 and 7.6-30 systems enhance operational efficiency by automatically making up or breaking out and autonomously evaluating the connection makeup data. Automated makeup enables precise control of the process, independent from any operator-specific influences or other human factors. Autonomous evaluation eliminates subjective graphical interpretations.
- The system offers simple and hands-free operation, removing personnel from the rig-floor red zone. With just one touch on the control panel. The system autonomously controls the process of both connection makeup and evaluation based on the pipe and thread OEM criteria.

#### LOCATION

Gulf of Mexico

#### WELL TYPE

Deepwater, exploration

#### CASING SIZE AND TYPE

16 in. to 3-1/2 in.

#### PRODUCTS/SERVICES

Vero automated connection integrity 22-150 and 7.6-30 systems



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## Our Approach (continued)

- For each Vero installation, Weatherford field personnel worked with key stakeholders in the customer's Decision Support Center to ensure all activities aligned with strategies of both the customer and Weatherford. The result was that the time and value saved were agreed upon by both parties.
- The Vero system delivered connection integrity through a smooth, automated makeup and evaluation process with repeatable graphs, successfully providing hands-free TRS services for all casing and strings.
- The customer's performance engineers recognized the value of the Vero system as it consistently made up threads with fewer rejected connections. This efficiency enabled the rig crew to maintain momentum when running casing and making faster connections per hour.

## Value to Customer

- Weatherford successfully completed a total of 6 casing and completion jobs, saving approximately 42 hours.
- The Vero automated makeup and evaluation software removed human factors while completing 3,000 connection makeups with zero laid-out joints during the project.
- The automated system executed accurate, consistent makeup and evaluation and confirmed that each connection met the OEM criteria throughout the operation.
- The remotely operated, hands-free system improved rig floor safety by requiring zero personnel in the red zone during TRS operations.

