

Noble initiative reduces manriding operations

NOBLE DRILLING HAS focused on an initiative that reduces or eliminates manriding operations when possible. The company says it will hoist personnel only when necessary and has implemented several creative techniques to avoid manriding operations on its fleet of offshore rigs around the world.

Factors contributing to the need to eliminate manriding include the risk of incidents, climate conditions, ergonomics, cost and operational constraints.

Consequently, Noble issued a company-wide policy that manriding operations are to be avoided whenever possible, and should only take place when there is absolutely no practical and safe alternative to accomplishing a task without the aid of mechanical hoists.

Much of the proactive effort was led by Noble's Europe Division. However, the company plans to avoid manriding as much as possible in its entire fleet.

"It's been quite some time since we had anyone injured during a manriding operation," said **Mike Cadigan**, HSEQ Manager for Noble Drilling. "A lot of this is due to the commitment of our management to avoid manriding, especially in our Europe Division.

"We are sharing their best practices with the rest of our fleet."

Not all of the best practices can be implemented on Noble's entire fleet due to space constraints. "Where some of the best practices make sense and can be incorporated into existing derricks, we will do so," Mr. Cadigan said. "However, all of the best practices are being incorporated into any new derrick that we design."

SAFETY OBJECTIVES

Noble took a two-pronged approach to proactively managing manriding operations: implementing strict manriding safety policies and equipment controls aimed at producing immediate results; and performing a longer-term evaluation of manriding to reduce and eliminate these operations.

To accomplish the first objective, in 2001, Noble standardized worldwide on the Ingersoll-Rand FA150 manriding winch, purchasing more than 140 for all rigs in the Noble fleet. The company also redefined its manriding policies and put

strict, controlled procedures in place to ensure that manriding operations are performed in the safest manner possible. Some of these policies include:

- **Permit to Work:** For a permit to be granted, operations personnel must have implemented certain planning and control measures. This policy provides a degree of risk mitigation and ensures that proper supervision is present during the operation.



The Noble Byron Welliver was the pilot rig in the company's initiative to reduce or eliminate manriding operations in its Europe Division. Changes and modifications will be made to all of the company's rigs when possible.

- **Personnel control measures and rig supervision:** A minimum of four rig personnel must be present to participate in the lift, one of which must be the rig manager.

- **Fall protection:** An independent means of fall protection must be in place during the operation should the primary hoisting line fail.

- **Toolbox talks and job safety analysis:** These task-specific activities must take place prior to the operation.

- **Simultaneous operations:** Certain rig operations are suspended during the manriding lifts to help safeguard personnel and the environment and ensure that an adequate level of supervision is dedicated to the task at hand. Additionally, the drill string must not be in motion and the top drive must remain stationary to enhance the safety of these operations.

- **No more than one manriding operation can occur at a time:** Manriding operations can only take place above or below the rig floor, but never in both places at the same time.

- **Competency assessment:** All personnel receive a manriding competency assessment. Only personnel who have been assessed and are deemed competent in manriding are registered to participate in a manriding operation.

- **Line of sight hand signal communication:** All personnel are aware of the appropriate hand signals and all communication is performed using hand signals. Radio communication is not allowed due to the risk of failure and the tendency of personnel to rely on it too heavily.

To accomplish the second, longer-term objective, the company began an assessment of all tasks utilizing manriding operations to identify solutions for eliminating the need to hoist personnel. This aggressive program included implementing and monitoring design changes on a pilot rig, as well as collecting best practices.

As a result, best practices and engineering designs achieved significant results on the pilot rig and are now being implemented on additional drilling rigs throughout Noble's fleet.

INCREASED SAFETY

Many of the best practices were implemented on the Noble Byron Welliver as the pilot rig in the company's Europe Division. Results achieved through this program are dramatic and have eliminated personnel exposure to this risk.

In Noble's European fleet, the average annual number of manriding operations performed is 119 per rig. Since instituting best practices for manriding on the Noble Byron Welliver, only nine manriding operations were performed on the rig from January 2004 to July 2004, and no manriding operations have been performed since July 2004. This accomplishment set a new standard within Noble's fleet.

Benefits of reducing and eliminating manriding operations include improved safety, easier access to equipment, improved housekeeping and reduced impact of maintenance on drilling operations.

Overall, manriding operations are being reduced throughout Noble's Europe Division.

BEST PRACTICES

Noble implemented numerous best practices in its manriding operations. As a result, the company received Special Awards in 2002 at the IADC North Sea Chapter Annual Safety Awards meeting for effective reduction of manriding operations for the following best practices.

Best Practice 101–Crown Service Platform. The crown service platform provides access to snatch blocks and padeyes underneath the crown. It provides access to all sheaves at the crown, enabling servicing and inspection of sheaves and access to change out sheaves without the need for manriding operations.

Best Practice 102–Extendable Top Drive Service Platform. The extendable top drive service platform provides 360° access to the top drive for service maintenance. The platform is positioned above the drawworks, providing technical staff and rig crew easy and safe access to the top drive for repairs.

This best practice allows for checks and changing out wash pipe of top drive if necessary. The benefits of this platform have been proven numerous times since installation.

Best Practice 103–Drill Line and Stabmaster Access Platform. The drill line and stabmaster access platform provides access to the fast-line guide and stabmaster. This platform is positioned

behind the top drive dolly tracks and accessed via a ladder.

Best Practice 104–Hang Off Line Access Platform. This platform provides access to the hang off line to secure the traveling block during slip and cut operations. It is positioned behind the top drive dolly tracks and accessed via a ladder.

Best Practice 105–Cable Tray and Light Placement. The cable tray and light placement allow for light maintenance without the use of a manriding winch. All cable trays were moved to run adjacent to the derrick ladder and all lights were strategically located to areas that could be accessed by either a derrick ladder or an existing platform.

Best Practice 106–Padeye Placement. The padeye placement can be strategically positioned at the crown level where sheaves can be accessed by hand without the aid of a manrider.

Best Practice 107–BOP Platform. A permanent BOP platform allows work on the BOPs without having to hoist a person above a deck.

Best Practice 108–BOP Scaffolding. The BOP scaffolding provides a work platform around the BOP after nipping up. The scaffold is permanently maintained while the BOP is in place over the well.

The scaffolding is used for access to valves once the BOP stack is nipped up. This practice eliminates the use of the manrider and has greatly reduced the number of manriding winch activities.

The scaffolding is also used around the completion tree during well test operations. The test equipment can be set up high above the drill floor and eliminates the need for manriding operations to open and close valves.

Best Practice 109–Access Platforms and Walkways. Access platforms and walkways are positioned strategically to enable access to lifting points or equipment, reducing the need for manriding operations.

The major benefit derived from this best practice is improved safety and ease of access to equipment. Tasks such as maintenance and housekeeping can be performed during drilling



The extendable top drive service platform provides 360° access to the top drive for service maintenance. The platform is positioned above the drawworks, providing staff and crew easy and safe access to the top drive for repairs.

operations in an organized, safe, and controlled manner.

Various platforms that can be built include a safe working area to perform maintenance and remedial work on the top drive, hoses/umbilicals and junction panels, a platform for safe access and maintenance to the BOP overhead crane, and walkways around the drill floor to safely clean the wind walls without any impact on the drilling operation.

Best Practice 110–Use of Casing Stabbing Boards. Use of casing stabbing boards eliminates the need for manriding in operations such as hanging off the traveling block and changing out the top drive swivel packing.

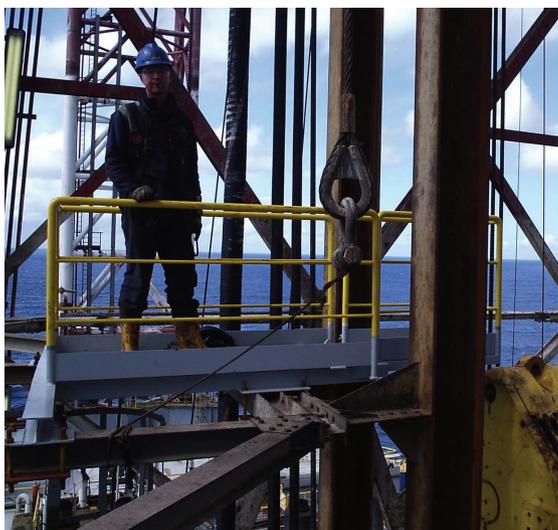
The use of stabbing boards during top drive and drill line maintenance operations enhances safety and, with effective planning, provides no interruption of the critical path.

Noble has successfully used the same proactive, systematic approach to problem-solving on other safety and operations practices, Mr. Cadigan noted.

“Continuous improvement is part of our culture at Noble, and also a requirement to maintain ISO 14001 certification across our fleet world-wide, Mr Cadigan explained.

“Noble is proud to set the standards for improving health, safety and environmental practices in the drilling industry,” he continued.

“As is the case with many of our HSE policies and procedures, reducing and eliminating manriding operations is simply the right thing to do for our employees and our clients.”



The platform, positioned behind the top drive dolly tracks and accessible via a ladder, provides access to the hang off line to secure the traveling block during slip and cut operations.