

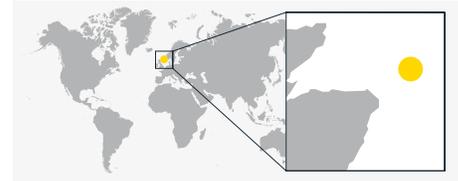


Case study: Tornar® BOP Cleaning

Archer performs a successful Tornar BOP Cleaning operation, removing debris from BOP after milling a window in 13 3/8" casing for Premier Oil in Solan Field.

Challenge

The Drilling company Awilco Drilling had concerns with their equipment and the amount of swarf that they were likely to encounter. After Archer Oiltools shared the results of previous operations utilizing the Tornar® BOP Cleaning, it was determined the use of the Tornar™ BOP cleaner was the best option.



Region: North Sea
Customer: Premier Oil
Field: Solan
Well type: Oil & Gas

Case benefits

The industry strives to minimize BOP downtime and recover debris from the BOP and Riser. BOP downtime has become an issue especially in deep and ultra-deep water environments. Regular mandatory BOP pressure tests need to be performed so subsequent failures, often due to debris within the BOP, don't occur. Often BOP failures require pulling the marine riser, repairing of BOP and rerunning the same. Such operations, depending on water depth, can take days to a couple of weeks to complete.

Key capabilities

- Effective BOP and Riser cleaning
- Configuration to suit any BOP requirements
- Drill pipe connection
- One piece mandrel
- Non-rotating stabilizer and magnet
- Most powerful magnets in the industry
- Proprietary Tornar™ flow port technology

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Solution

The operator chose Archer's 17.45 inch Tornar® BOP cleaner, a solution that has been specifically designed and developed to remove debris from 18.75 inch subsea BOP stack safely, rapidly and reliably. Tornar™ technology combines Archer proprietary Tornar flow ports with a powerful industrial magnet to ensure the maximum extraction of harmful debris from the well. The Tornar™ flow ports positioned within the large body stabilizer create a high-rate drilling fluid cyclone even at low pump rates. A proprietary riser cleaner is also available to maximize debris recovery for subsea applications. The differential pressure caused by the cyclone generates a powerful suction effect, which extracts any accumulated debris from the BOP and retains it in the drilling fluid—just like a vacuum cleaner. The powerful 17.45 inch industrial magnets incorporated within the cleaning string improve the overall efficiency of the system by ensuring the effective and complete retrieval of metallic debris from the BOP and its surrounding area.

Results

The Tornar BOP cleaner proved to be a highly effective solution for the task at hand, with a considerable amount of swarf. 45 KGS was recovered from the BOP and subsequently the BOP test was completed successfully and safely. Had the BOP test been conducted without recovering such large volumes of debris from the well, it may have been unsuccessful at best, and at worst may have resulted in permanent damage to the BOP. Based on the results from the operation Premier Oil has approved Tornar technology as the primary BOP cleaning solution in order to minimize BOP downtime and maximize operational safety.



Tornar® Sub



17.45" BOP Magnet

Typical applications

- After window milling
- After section milling
- Wellbore cleanout
- Prior to BOP testing
- BOP and marine Riser pulling

Additional Information

- Wash down at 1000gpm. Minimal returns at shakers, predominately clumps of fines composed of mostly mudstone with some swarf.
- Wash up with 1000gpm. Similar minimal amounts of returns. Similar composition as before.
- Clean up (5 x up/down passes) with 1000gpm. Almost no returns at shakers. Traces of fines as before.
- Successful use of Tornar as 45 KGS of swarf was recovered that would have otherwise remained in BOP. Premier Oil and Awilco Drilling are delighted with the results and the fact it keeps the BOP in good condition and prevents issues with debris contamination.

