Technical Bulletin Identification of connection torque status

Background

CASE #1

An investigation was recently performed where an assembly that had been assembled and torqued onshore backed-off while drilling. A dedicated fishing trip was required to retrieve the lower section which resulted in significant NPT. It was determined that there were a number of possible issues: (a) The connection that backed off may not have actually been properly fully torqued and nobody noticed it when it was picked up. (b) While making up additional assemblies for the BHA in the rotary table, the "failed" connection may have been inadvertently "broken out"

(c) It may have encountered stick / slip whilst drilling which caused the back-off.

CASE #2

While pulling out of hole, the rig crew had fitted "Chain Tong Tight" Lift Subs to the top of the stands of Drill Collars. The BHA was racked back for some period of time which

included inclement weather when the Derrickman doing his weekly checks noticed one of the Lift Subs had started to back off. It would probably not have been visible in the Drillers camera when run and could have resulted in a significant incident.

Observations

In case #1, although torque tape had been applied on either side of the connection, tape does not provide a clear visual indication if the two parts of a connection move differentially (back-out).

When multiple component assemblies are being built, it can be guite easy to miss a connection out when applying final torgues.

Although the use of "Torqued" tape is quick, it can cause issues once it comes off. either by plugging surface lines or causing subsequent restrictions in the BHA. (Stuck in Filters etc).

Recommendations

Make-up torques should be carefully calculated for each pair of components and take into account the connection type, the thread compound used and the critical dimensions. A "controlled" procedure should be followed. It is recommended that the procedure advises that as soon as connections have been correctly torqued, they should have a clear line painted across both components. A good practice would also be to mark on the actual make-up torgue that had been applied so that any changes will be visible.

More info

For more information or assistance, contact Fearnley Procter Drill String Engineering at DShelp@fp-g.com

This connection is correctly torqued up but without any reference lines, it is difficult to physically confirm



This connection is correctly torqued. If the lines are not aligned, then it indicates that something has changed and checks are required.





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