PLT MLT Best Practices Lead To A Successful Application Of The First Thrubit-MLT Enhancement Worldwide

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Abstract
Executing PLT-Multilateral Tool (MLT) jobs requires a significant amount of time to run in hole and pass through one wellbore or more to enter target lateral(s) and log them. Entering the wellbore can itself be challenging due to several factors such as wellbore size and condition, lateral window condition, coiled tubing condition, and the choice of MLT. Minimizing the required time to execute a PLT/MLT job would positively impact the whole operation from several aspects, including reduction of operational footprint, reduction in fuel consumption and emissions, cost avoidance, and increase in bottom hole assembly and coiled tubing run life. Hence when a new technology achieves this, the lessons/methods should be learned and applied on all future job executions.

The objective of this paper is to describe the lessons learned from the PLT/MLT job after successfully tackling the challenge of accessing a previously inaccessible target wellbore using the Thrubit-MLT (TBMLT). To overcome the challenge, engineering-based best practices were established comprehensively on site, these consisting of function testing the MLT, measuring the MLT maximum radial displacement, ensuring it is greater than the main wellbore casing ID where the target window is located, and finally extending the MLT if it is not.
After applying such, a decision was made to enhance the MLT by extending its arm in order to provide the needed radial displacement. Those applied problem-solving practices led this job to be recognized as the first type of enhancement nationally and worldwide to apply on the used MLT. During the discussed PLT/MLT job, moreover, the main wellbore casing size (9 5/8") played a huge role into triggering this challenge, as previously the MLT has not been used in a 9 5/8" casing or larger. The paper finally proposes several best practices when it comes to MLT pre-job function testing in order to maximize the chance of successful job execution.

The novel MLT enhancement was tested onsite, and it resolved a time-consuming challenge that would have affected the quality and run life of the used equipment. In addition, a risk assessment was conducted on the newly implemented enhancement, and the results show only a negligible risk in applying the enhancement to the used MLT during a PLT operation.