

Petrobras Recovers Stuck Drillstring at 4,540 m, Saves BHA Worth USD 2 Million

Hydra-Jar AP drilling jar frees drillstring after 1,007 jar fires, exhibits outstanding durability in challenging deepwater environment offshore Brazil

CHALLENGE

Free stuck drillstring and 12¼-in directional BHA at 4,540 m in a harsh drilling environment.

SOLUTION

Run Hydra-Jar AP* double-acting hydraulic drilling jar, placed at the optimal position on the drillstring, to obtain the force needed to free the stuck drillpipe and components.

RESULTS

- Recovered drillstring after 1,007 jar fires within 120 hours.
- Retrieved drilling and measurement tools in good condition, saving BHA worth USD 2 million.
- Allowed Petrobras to continue drilling the well to plan, avoiding reentry or a new well.



Free drillstring after multiple stuck pipe challenges

While drilling a 12¼-in section of a deepwater well in the tough, igneous rock formation of the Uruguá field in Brazil, Petrobras faced wellbore stability issues and high probability of stuck pipe. During the first run, the drillstring became stuck. The drillstring parted during the recovery operation, leaving a fish that contained a radioactive source. The fish was recovered after two weeks, and a new BHA was assembled to reach TD.

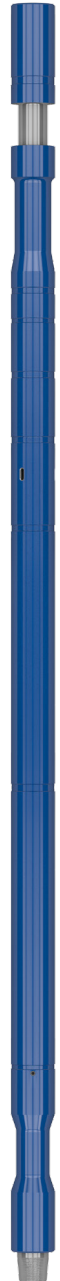
During the second run, the drillstring continued to experience difficulties; 30 m before reaching TD, the rig experienced a topdrive system failure. Petrobras decided to pull the drillstring out of hole. However, the drillstring became stuck again at 4,540 m.

Run a double-acting hydraulic drilling jar

The Hydra-Jar AP drilling jar was used to amplify the force applied at surface and free the stuck drillstring components. This tool is used during drilling or workover operations to jar up or down with a force ranging from a light blow to an extraheavy impact. Hitting performance is further enhanced by the jar's detent system, which enables consistent loading and firing in a broad range of downhole conditions.

Recovered the drillstring, saved the well

After completing 1,003 jarring cycles, a string shot operation was performed, however the drillstring remained stuck. The jar was fired four more times, completing a total of 1,007 jarring cycles in 120 hours. At that point, Petrobras recovered the drillstring, which included a BHA worth USD 2 million. Additionally, several other valuable drilling and measurement tools were recovered with the drillstring and were found in good condition.



Hydra-Jar AP double-acting hydraulic drilling jar.

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Drilling