CASE STUDY: OFFSHORE BRAZIL

FoamSet cementing system flawlessly set, broke new global record for largest deepwater foam cementing job

CHALLENGES

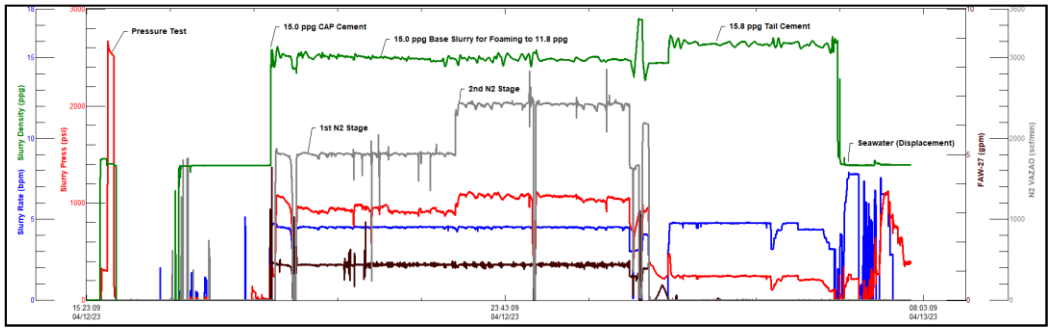
- Deepwater application
- Maintaining equivalent circulating density (ECD) within the operational window to prevent fluid loss
- Identifying the precise slurry for low ECD section of the well required for the high compressive strength needed

SOLUTION

- FoamSet foam cementing system was used to:
  - Maximize the compressive strength of the cement slurry
  - Keep ECD in the operational window to avoid fluid losses
  - Reduce amount of dry cement needed
- SeaHawk cementing unit
- CemMaster zonal isolation cementing software was utilized to design the proper slurry makeup

RESULTS

- Performed 11.3 hours of on-the-fly mixing and pumping
- Maintained excellent cement density control with a constant pumping rate during the entire job
- Pumped 2,900 bbls of base slurry and 10,000 gallons of nitrogen – the largest volume in Baker Hughes history
- Completed the job in 16 hours
- Reduced CO_2 emissions by 95 metric tonnes, 15.6% through the use of foamed slurry versus dry lightweight cement



Baker Hughes performed a record-breaking foam cement job on this well for Equinor Brasil.

"Baker Hughes is committed to safe, efficient, and flawless operations. We are happy to celebrate this global foam cementing milestone!"

– **Roger Rangel da Cunha**
Equinor Brazil

*The results of the FastTLCA are a calculated estimate of the emissions from our product or service that covers all lifecycle states of that product or service from the cradle to grave and are provided to illustrate the lifecycle emissions from a given product or service that is used under certain conditions and assumptions and the results are not intended to guarantee or predict actual lifecycle emissions of a given product or service. Our FastLCA is a lifecycle assessment (LCA) that is aligned with the ISO 14067:2018.

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