



ABERDEEN DRILLING SCHOOL COLLABORATED WITH A GLOBAL SERVICE COMPANY TO DEVELOP A SERIES OF NEW BESPOKE TRAINING MODULES FOR INCLUSION IN STUCK PIPE PREVENTION TRAINING FOR FIELD ENGINEERS AND WELL-SITE OPERATIONS TEAMS.

Case Study

Client: Global Service Company

Location: Aberdeen, UK

Challenge: To establish a corporate standard that would help to reduce the incidence of stuck pipe and significantly lower the associated costs of NPT within a global drilling services provider.

Solution: We developed three new bespoke modules on jarring, drill string design, and inspection which were then incorporated into our existing, industry leading, Stuck Pipe Prevention course. The result was a single training package designed specifically for the client's well design engineers, field engineers and well-site operations teams.

"I can apply newly acquired knowledge to everyday duties in engineering, planning and well profile design." - Snr Well Designer

"I now have a clearer direction on how to mitigate and react to stuck pipe." – Drilling Engineering Solutions Engineer

Background

Our initial discussion with the client covered a range of recent stuck pipe incidents and the question of how to reduce the frequency and costs involved through training was raised. Topics to be covered in training included methods to prevent stuck pipe (from both a design and operational perspective), methods for recognising the early warning signs of stuck pipe, plus the skills required to free stuck pipe safely and efficiently. Working closely with the client, we conducted a training needs analysis identifying a number of skills gaps that could be addressed through interactive training using company-specific case studies. Our aim was to create a global corporate standard of stuck pipe prevention training, from which course participants would gain maximum value.

Solution

We developed a range of bespoke interactive training modules using our inhouse technical and graphics teams, which focused on addressing the skills gaps identified in the training needs analysis.

Preliminary training modules covered prevention techniques at the well design phase. Training progression then worked towards improving participants' understanding of mud properties which may help or hinder stuck pipe events, as well as enhancing drillstring design skills to increase combined load limits for optimal BHA configurations. The course also addressed the effects of jar placement, the implications of tortuosity, and how these influence the potential to free stuck pipe.

To provide the course participants with all the skills needed for stuck pipe mitigation, we covered stuck pipe prevention and jarring in detail but also ensured that stuck pipe recovery techniques were taught. Back-off techniques and fishing methods, an important learning outcome identified in training needs analysis, were covered while reinforcing the key theme of stuck pipe prevention is better than mitigation or recovery.

Outcome

Course participants were engaged with bespoke classroom-based training by an experienced instructor who facilitated best practices in stuck pipe prevention, and addressed many of the specific engineering challenges faced by our client's operations teams. The course is now delivered as corporate best practice within our client's global services and operations teams.

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