

TEMS International is an independent provider of environmental management and compliance services to the global oil and gas industry. Our services are focused on managing and optimising drilling performance and drilling waste in real time, while ensuring an asset remains in environmental compliance. Ultimately, our experienced team aim to reduce drilling costs and ensure legislative compliance targets are met or exceeded.

- Location: **Deepwater, Offshore Trinidad and Tobago**
- Project date: **July – September 2018**
- Drilling duration: **56 days**
- Total footage drilled: **7,087ft**
- Total estimated saving: **\$133,218**
- Estimated SBM savings: **413 barrels**
- Shaker screens repaired: **35**

OUTLINE

TEMS International supported an independent global exploration and production company during the drilling of a deepwater well in offshore Trinidad and Tobago. The project, which commenced in July 2018, lasted for 56 days, during which time TEMS International engineers oversaw more than 7,000ft of drilling.

TEMS International provided its drilling performance management and optimisation, and continuous environmental compliance legislation services during the project. Prior to the project commencing, TEMS International engineers conducted an extensive audit to identify potential issues regarding the containment of drilling fluids, diesel fuel and other hydrocarbons used in the daily operations onboard the rig. The noted issues were resolved prior to and during drilling operations, depending on their seriousness.

The overall aims of the project were to:

- Achieve governmental oil on wet cuttings (OOWC) limitations
- Optimise solids control equipment to deliver maximum solids removal with minimum liquid retention
- Reduce synthetic based mud surface consumption
- Reduce shaker screen consumption
- Minimise environmental impact

SERVICES DELIVERED

Drilling performance management and optimisation

A process approach to drilling performance management that adds value to the entire drilling process. The service aims to ensure more effective and efficient drilling – reducing drilling days – through optimised fluid management, effective solids control management with the overriding proviso of safety and environmental protection.

Continuous environmental compliance legislation

Leading guidance on environmental compliance, prior to and for the duration of a drilling campaign. The comprehensive technical services and environmental consultancy enable well planners to ensure permits are in place, and that drilling operations keep pace with, or exceed, the evolving compliance regulations of drilling locations.



OUTCOME

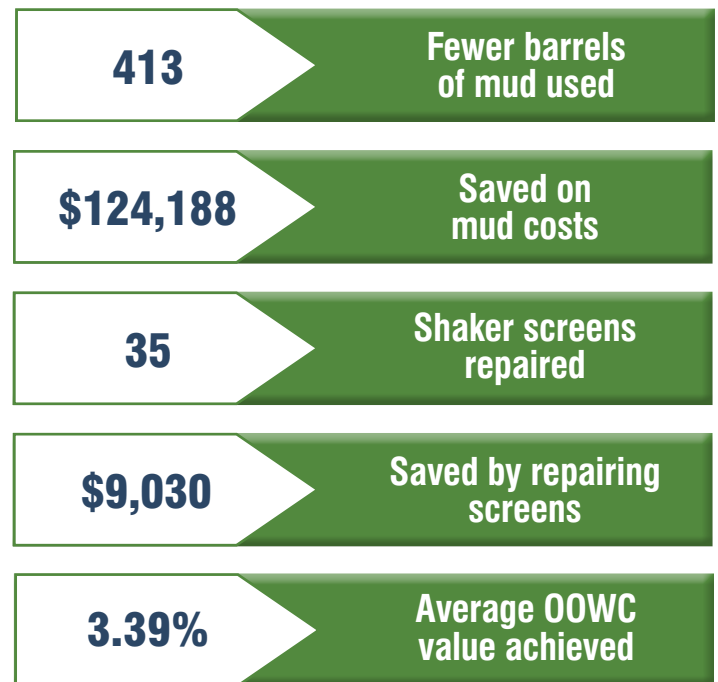
The involvement of TEMS International in the drilling campaign helped the operator reduce its synthetic-based muds consumption, helping to reduce drilling costs. Over 410 fewer barrels of mud were used to drill the well against the target, generating a total saving of around \$125,000. Savings were achieved in three of the four sections drilled.

During the drilling campaign shaker screens were run for 1,251 hours, during which time 70 screens were installed. Of those, TEMS International engineers repaired 35 screens, enabling their reuse and saving \$9,030 against the cost of new screens.

The Government of the Republic of Trinidad and Tobago has set a permitted oil on wet cuttings (OOWC) discharge value for synthetic-based muds of 5%. TEMS International achieved an average OOWC rate of 3.39%, comfortably within permitted guidelines.

TEMS International engineers helped the client achieve its environmental aims of working in the offshore Trinidad. Those focused on spill containment and prevention via the identification, and continual inspection, of potential sources of spillage, the introduction of policies for increased crew awareness and rig site procedural improvements.

A number of additional recommendations were identified to further improve the environmental performance of drilling operations and increase efficiencies in relation to shaker screens.



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