

# CASE HISTORY 9

## 2019

**TEMS**  
INTERNATIONAL

**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: **Offshore Trinidad**
- Project date: **March – April 2019**
- Drilling duration: **52 days**
- Total footage drilled: **5,753ft**
- Total estimated saving: **\$119,744**
- Estimated SBM savings: **366 barrels**
- Shaker screens repaired: **53**

### OUTLINE

TEMS International was contracted by an existing client – an independent global exploration and production company – to support exploratory drilling operations in offshore Trinidad. The deepwater project commenced in March 2019 and lasted for 52 days. During the project, over 5,500ft of drilling was overseen by TEMS International engineers.

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. These observations were either resolved prior to and during drilling operations, depending on their seriousness, or recommendations made to implement improvements.

The overall aims of the project were to:

- Adhere to governmental discharge policies
- 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

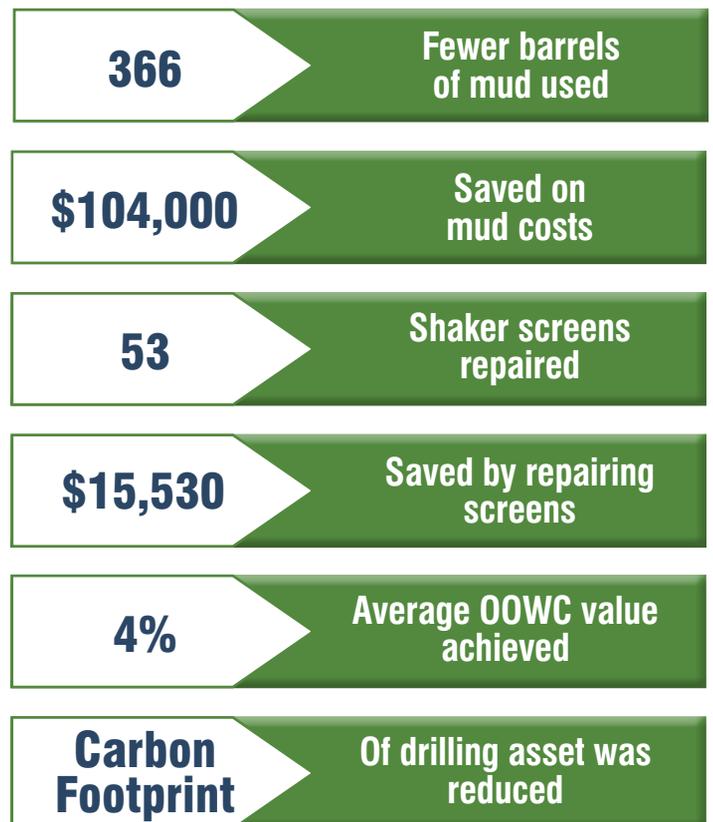
TEMS International engineers worked closely with personnel onboard the drilling rig to deliver a reduction in synthetic-based mud consumption over the course of the 52-day drilling campaign. During this time, the engineers' involvement ensured environmental compliance with local regulations was adhered, a reduction in overall drilling costs was achieved and the drilling asset's carbon footprint was lessened.

This resulted in over 360 fewer barrels of mud being used to drill the well, delivering a saving of around \$100,000 on mud costs. Shaker screens ran for more than 700 hours during the drilling campaign, during which time TEMS International engineers repaired 53 screens, enabling their reuse and reducing screen costs by around £15,500.

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 4% during the SBM phase of drilling, comfortably within permitted guidelines. This was achieved through close monitoring and optimisation of solids control equipment.

TEMS International engineers assisted the client in achieving its environmental aims during drilling operations in offshore Trinidad. Those focused on spill containment and prevention via the identification, and continual inspection, of potential sources of spillage.

A series of recommendations were also made which will further improve the environmental performance of the asset during drilling operations.



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