CASE STUDY
Deepwater Gulf of Mexico

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: **Deepwater, Gulf of Mexico, United States**
- Project date: **April – October 2018**
- Drilling duration: **183 days**
- Total footage drilled: **48,639ft**
- Total estimated saving: **$853,569.75**
- Estimated SBM savings: **5,100+ barrels**
- Shaker screens repaired: **34**

OUTLINE

TEMS International was contracted by an independent global exploration and production company to support the drilling of a deepwater well in the Gulf of Mexico. The project, which commenced in April 2018, lasted for 183 days, during which time TEMS International engineers oversaw more than 48,000ft of drilling.

TEMS International provided its drilling performance management and optimisation, and continuous environmental compliance legislation services during the project. These services were delivered without using secondary processing equipment such as cuttings dryers.

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 in line with EPA reporting
- 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.

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OUTCOME

The firm's involvement in the drilling campaign helped the operator achieve a reduction in its synthetic-based muds consumptions, resulting in significant cost savings. Over 5,100 fewer barrels of mud were used to drill the well against the target, generating a total saving of $845,205. The savings achieved in each of the nine sections drilled varied. During the drilling campaign shaker screens were run for 5,943 hours, during which time 151 screens were installed. Of those, TEMS International engineers repaired 34 screens, enabling their reuse and saving expenditure on the cost of new screens.

In the Gulf of Mexico, the US Environmental Protection Agency (EPA) permitted retention on cuttings (ROC) discharge value for synthetic-based muds is 6.9%. TEMS International achieved an average ROC rate of 3.25%, well within the EPA regulations.

TEMS International engineers helped the client achieve its environmental aims of working in the Gulf of Mexico. 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.

These savings and low ROC rates were achieved onboard the rig without the use of cuttings dryers. Operating without dryers reduced the volume of waste being backloaded to shore, cutting treatment and logistics costs. No personnel were required onboard to operate the dryers, saving on personnel costs. Combined, this helped to lower the carbon footprint of the asset.

5,100+	Fewer barrels of mud used
$845,205	Saved on mud costs
34	Shaker screens repaired
3.25%	Average ROC rate achieved
No dryers	Used onboard the rig, reducing carbon footprint

To learn more contact TEMS International:

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DEEPWATER GULF OF MEXICO