Drilling rig offshore optimization problem

Explore the future of offshore drilling: key opportunities, challenges, and sustainable innovations shaping the industry"s role in global energy supply.

To solve the problems of the low energy efficiency and slow penetration rate of drilling, we took the geological data of adjacent wells, real ...

The present article analyzes the technological advancement and innovations related to drilling operations. It covers the review of currently proven and emerging ...

Rigs are critical capital-intensive resources for oil and gas exploration and production operations, such as drilling, completion, and workover. The Rig Scheduling ...

The most accurate model was then combined with an optimization algorithm, differential evolution (DE), to optimize the drilling operation in Well No. 9. Four different ...

Offshore drilling is one of the most technically demanding operations in the energy sector, requiring precision, efficiency, and safety to ...

number of drilling rigs, their locations, and the set of wells assigned to each rig will establish the total cost of drilling for an offshore oil field. Minimizing this total cost is a challenging and ...

Abstract and Figures Reducing Non-Productive Time (NPT) is critical for cost optimization in offshore drilling operations, where operational efficiency directly impacts ...

In order to ensure the safety of offshore drilling, we must explore the common mechanical problems and improvement measures of offshore drilling rig lifting system. This paper mainly ...

This would allow smaller rigs to drill in deeper waters. Initially proposed to address the issue of narrow safety density windows in deepwater drilling, dual-gradient drilling ...

In 2025, offshore oil rigs are standin" at a major turning point. From smart tech to climate pressure, the upstream oil and gas industry is dealin" with a mix of fresh possibilities and real tough ...

Offshore drilling refers to a mechanical process where a wellbore is drilled in the seabed. It is classically carried out in order to explore for and subsequently extract petroleum which lies in ...

Due to advances in machine learning and AI, tools can be used to troubleshoot underperforming rigs, enhance

well planning and carry out maintenance before problems arise.

Rigs are critical capital-intensive resources for oil and gas exploration and production operations, such as drilling, completion, and ...

Drilling success, depending on prevalent conditions, is a function of several general factors. These include the selection of the best technologies ...

Offshore drilling operations represent the most critical investment for oil companies worldwide, involving sophisticated techniques for extracting ...

Offshore oil field scheduling problems typically involve a long planning horizon of up to 10 years, with multiple platforms, wells, and potentially interconnecting ...

In this chapter, we will delve into the applications of Artificial Intelligence (AI) in drilling and completion engineering within the oil and gas ...

Therefore, multi-objective optimization of a drilling derrick was proposed to address the problems of large structural deformations, low safety factors, and low material utilization ...

Drilling is an expensive and necessary operation for petroleum and gas exploration. The ultimate aim in drilling operations is to increase drilling speed with less cost while ...

Aiming to fulfill these gaps, this study proposes a data-driven optimization framework for the workover rig scheduling problem for a heterogeneous fleet of offshore rigs.

PDF | On Apr 22, 2018, Zeyad Hassan published Common Drilling well problems (Reasons, indications, mitigation and prevention) | Find, read and cite all the ...

These case studies demonstrate the transformative impact of cutting-edge technologies on offshore drilling operations, highlighting how subsea drilling systems, advanced drilling rigs, ...

The present article analyzes the technological advancement and innovations related to drilling operations. It covers the review of currently ...

This study introduces a framework for evaluating and comparing drilling rigs, which considers key technical specifications, environmental impacts, and economic factors. Moreover, the paper ...

Multiple supervised and unsupervised artificial intelligence techniques have been adapted and applied for real-time drilling monitoring and optimization purposes. This chapter ...

Problem: Transocean, a leading offshore drilling company, wanted to optimize the complex well construction process across its fleet of rigs.

Rigs are critical capital-intensive resources for oil and gas exploration and production operations, such as drilling, completion, and workover. The Rig Scheduling Problem (RSP) ...

Conducted over two years at various oil drilling sites in Canada, the study highlights the integration of Logging While Drilling (LWD) and Measurement While Drilling (MWD) data into ...

Explore expert insights, transformative success stories, and the latest breakthroughs in Corva"s drilling optimization technology. From predictive ...

Hooshang Zamanifard. (2016) âEURoeDrilling Rigs and Their Role in Logistics and Supply Chain Management (SCM) for Optimization of Drilling Industry through Reducing ...

Four different optimization scenarios were explored to determine the optimal drilling parameters, surface rotary speed (RS) and weight on bit (WOB), to enhance the drilling ...

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